Economic Review

December 2006




National Bank OF BELGIUM
Eurosystem

ISSN 1780-664X

Contents

Economic projections for Belgium – Autumn 2006

Introduction

In the spring of 2006, the macroeconomic projections for the euro area drawn up by the Eurosystem and the Bank's projections for Belgium assumed a consolidation of the cyclical improvement in progress at that time, despite the expectation that oil prices would remain at a high level. Since then, owing to revisions of the preliminary statistical estimates and new actual figures, it has become apparent that the expansion in activity in the first half of 2006 was stronger than indicated in those forecasts. In addition, having risen further during the summer, oil prices dropped by some 20 p.c., and have hovered around 60 dollars since October 2006.

These factors prompted an upward revision of the growth projections for the euro area, first in the intermediate results presented by the ECB in September, and then again in the Eurosystem projections published in the ECB's December 2006 Bulletin. In the case of inflation, the changes were smaller; they are due to the direct downward pressure exerted by energy prices.

Coinciding with the publication of new projections for the euro area, this article offers a brief presentation of the results for the Belgian economy. These were obtained using the same methods and procedures as in the spring[1], and incorporate information published since then. In particular, they take account of the new national accounts data published by the NAI[2], and the new government budget projections for 2007. The projections for Belgium were based on information available on 24 November 2006, including the very partial information on the restructuring of a large enterprise.

1. International environment and assumptions

Having displayed great vigour once again at the start of the year, world economic growth slowed slightly during 2006, mainly as a result of the cyclical downturn in the United States. However, underpinned by the dynamism of the emerging economies, it is likely to remain robust in 2007 in a context of generally favourable financing conditions and relatively high corporate profitability in the majority of economic regions.

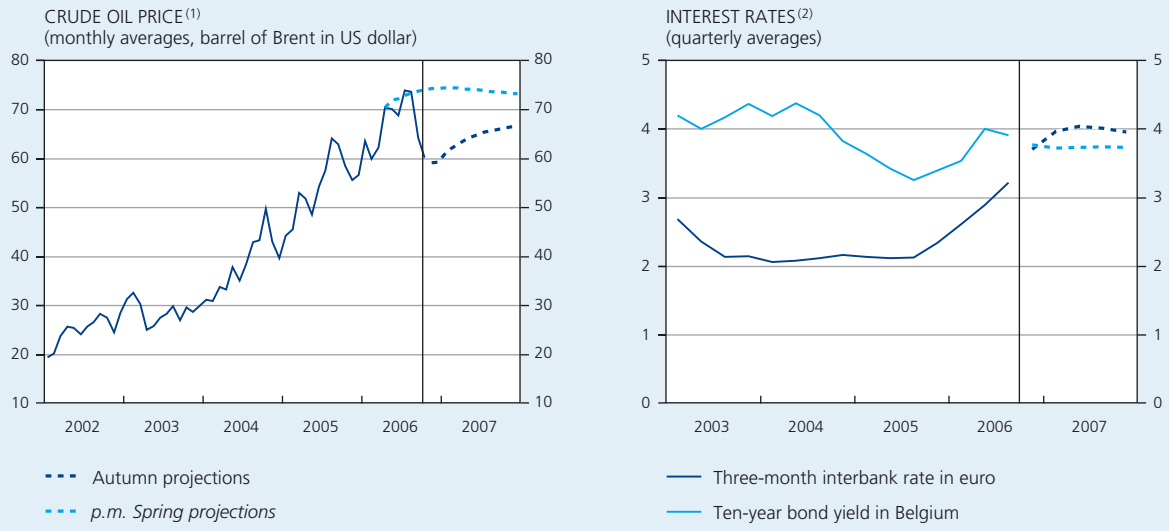
In addition, although oil prices are historically high at around 60 dollars per barrel, the about 20 p.c. fall in oil prices seen between August and October 2006 helped to reduce somewhat the impediments to growth. That movement was itself due to the cyclical slackening of demand, combined with favourable conditions for oil production – especially the clemency of the hurricane season in the Gulf of Mexico – and the perceived easing of geopolitical tensions.

In the euro area, the rate of expansion in activity picked up significantly during the first half of 2006. It looks set to remain steady during the rest of the year and in 2007, except for a temporary dip in growth predicted for the first quarter in view of the effect which the increased rate of VAT in Germany will have on consumption and investment in housing. According to the new Eurosystem projections, having amounted to 1.5 p.c. in 2005, GDP growth should range between 2.5 and

(1) NBB (2006), "Economic projections for Belgium – Spring 2006", Economic Review, June 2006.

(2) The NAI now uses the method of chainlinking to estimate volume and price movements of the different variables. For an explanation of this change of method, see http://www.nbb.be/doc/DQ/F/DQ3/HISTO/NFDC05.pdf

CHART 1 PROFILE OF THE OIL PRICE AND INTEREST RATE ASSUMPTIONS



Source: ECB.
(1) Actual figures up to October 2006, assumption from November 2006.
(2) Actual figures up to the third quarter of 2006, assumption from the fourth quarter of 2006.

2.9 p.c. in 2006 and between 1.7 and 2.7 p.c. in 2007. The revival of business investment is expected to continue, still supported by foreign demand. The improvement in the labour market and disposable income will help to bolster private consumption.

In a context of moderate labour cost increases, inflation – which measured 2.2 p.c. in 2005 according to the HICP – should remain broadly at that level, ranging between 2.1 and 2.3 p.c. in 2006 and between 1.5 and 2.5 p.c. in 2007. The expected reduction in the contribution of energy prices is likely to be offset in 2007 by the increase in indirect taxes.

Box – Eurosystem Assumptions

The Eurosystem's economic projections for the euro area, and the Bank's corresponding projections for Belgium, are based on the following technical assumptions:

- the interest rates are based on market expectations. As an annual average, short-term interest rates in euro are projected to rise from 3.1 p.c. in 2006 to 4 p.c. in 2007. Long-term interest rates on Belgian bonds are projected at 3.8 p.c. and 3.7 p.c. respectively;
- bilateral euro exchange rates are held constant at their mid-November 2006 value, namely 1.28 US dollars to the euro;
- according to the price movements implied by forward contracts, the price per barrel of Brent on the international markets should average 64.6 dollars in 2007, against 65.5 dollars in 2006;
- the growth of Belgium's export markets in real terms, measured as the weighted sum of imports by partners, including those in the euro area, should top 9 p.c. in 2006, before dropping to around 6 p.c. in 2007;
- the export prices of euro area competitors are projected to rise by 2.5 p.c. in 2006 and 1.4 p.c. in 2007;
- the results for public finances are calculated by taking account of the macroeconomic environment and the budget measures which have already been announced and specified in sufficient detail.

▶

EUROSYSTEM PROJECTIONS: RESULTS AND ASSUMPTIONS

	2005	2006	2007
Projections for the euro area		(Annual averages)	
GDP in volume	1.5	2.5 – 2.9	1.7 – 2.7
Inflation (HICP)	2.2	2.1 – 2.3	1.5 – 2.5
Eurosystem assumptions			
Three-month interbank rates in euro	2.2	3.1	4.0
Ten-year bond yield in Belgium	3.4	3.8	3.7
Euro exchange rate against the US dollar	1.24	1.25	1.28
Oil price (US dollar per barrel)	54.4	65.5	64.6
		(Percentage changes)	
Export markets relevant to Belgium	6.8	9.5	6.1
Competitors' export prices	2.4	2.2	1.2
of which: competitors from the euro area	2.3	2.5	1.4

Source: ECB.

2. Activity, employment and demand

As in the euro area, following a sluggish period at the beginning of 2005, economic activity in Belgium became considerably livelier in the fourth quarter of 2005 and at the beginning of 2006, with quarterly GDP growth attaining 0.9 p.c. in the first quarter and 0.7 p.c. in the second quarter. Apart from the support of robust foreign demand, the main factor in this improvement originated within the economy, in household expenditure on consumption and housing, and business investment. Having fallen to 1 p.c. in the third quarter of 2005, year-on-year GDP growth reached 3.1 p.c. in mid-2006, the fastest rise since the end of the year 2000.

As the cyclical catching-up effects fade away, GDP growth is expected to have slowed slightly in the second half of the year, settling into a sound course more in line with the scope for expansion in the medium term. According to the initial NAI estimate, quarterly GDP growth will have dropped to 0.6 p.c. in the third quarter of 2006, and the information obtained from the business surveys suggests that a similar figure will apply in the fourth quarter. In all, the growth rate will have doubled between 2005 and 2006, rising from 1.5 to 3 p.c., outpacing the average for the euro area. In a relatively neutral general environment in terms of foreign demand and exchange rates, it is forecast to drop to 2.1 p.c. in 2007, a rate close to the estimates of the economy's potential.

Despite the temporary slowing of activity evident at that time, the rate of net job creation gradually accelerated during 2005 to reach an annual average of 1 p.c., following three years of restrained recruitment. It is forecast to maintain that level in 2006 and 2007, as the fluctuations in GDP growth are largely cushioned by the pro-cyclical nature of labour productivity. Thus, around 43,000 net additional jobs will have been created each year, on average, from 2005 to 2007. However, in view of the rapid expansion of the labour force since 2005, there will be hardly any reduction in the unemployment rate during the forecast period, at an average of 8.3 p.c. in 2007 compared to 8.5 p.c. in 2006.

The favourable trend in employment, and more generally in activity, has led to a faster increase than in previous years in the incomes which households obtain from their employment and self-employed activity, and – mainly via dividends – from their capital. In addition, their purchasing power has been sustained by the effects – which were substantial in 2006 – of the implementation of the last phase of the tax reform initiated in 2001. Thus, following an increase in real terms of just 0.9 p.c. in 2005 and a cumulative decline of similar size over the

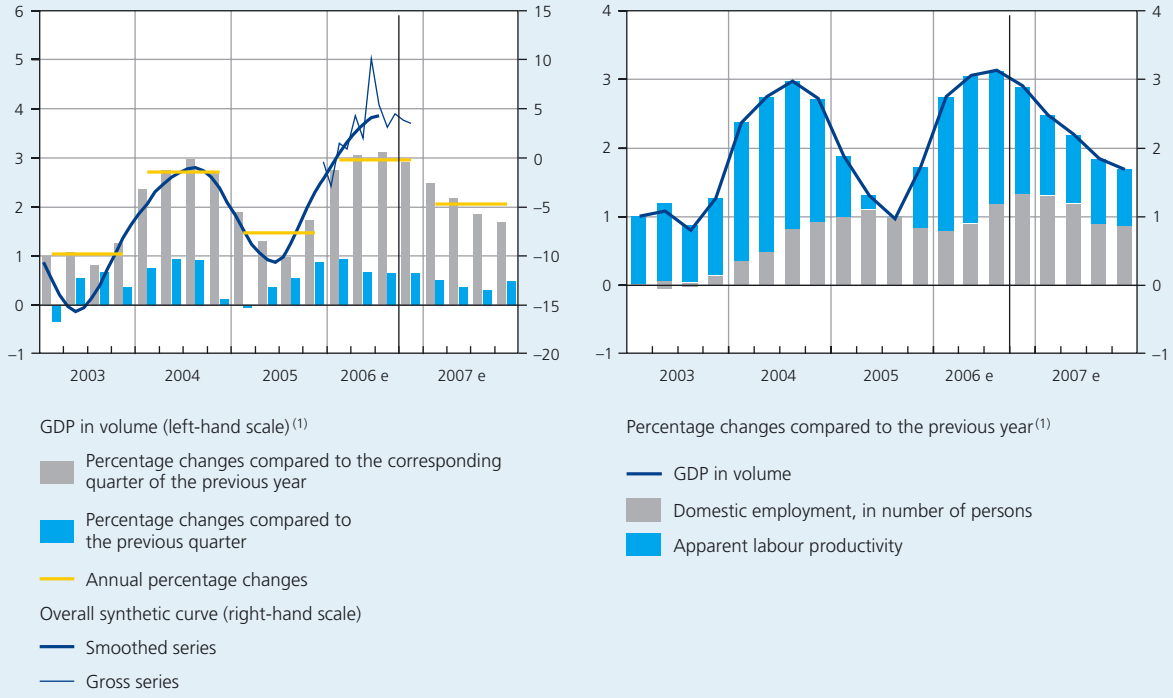
two preceding years, their disposable income is predicted to increase by 2.7 p.c. in the current year and 2.1 p.c. in 2007. Private consumption, which had played a full role in the cyclical upturn at the beginning of the year, is expected to grow by an average of 2.4 p.c. in 2006, then 2 p.c. in 2007. In a context of strengthening household confidence, owing to the easing of pressure on energy prices and the improvement in the general economic situation, combined with the rapid increase in disposable income, household savings are expected to remain steady over the projection horizon, at around 13.5 p.c. of disposable income. Once again, the bulk of those savings will be allocated to investment expenditure on housing, in the form of new construction or renovation. Maintaining the momentum seen in the two preceding years, that expenditure should increase by almost 5 p.c. in real terms in 2006 and 2007.

According to the revised national accounts data, 2004 saw a significant recovery in business investment, driven mainly by the service branches, before a slight ease in 2005. The expansion picked up again in 2006 at a more sustained rate than predicted, and extended into industry. In a favourable context in terms of operating profitability and financing conditions, and taking account of the outlook for demand which appears to be solid, while the rate of capacity utilisation has increased as activity speeded up, business investment should increase by 5.8 p.c. in 2006 and 4.8 p.c. in 2007. However, these annual averages mask a gradual slowing down during the second year, as the cyclical accelerator effects ebb away. Public investment is expected to decline in the two years covered by the forecasts.

Boosted by the expansion of the euro area, foreign demand for Belgian goods and services is expected to remain a significant factor underpinning exports. During 2006, those exports gradually responded in a context of relatively stable exchange rates for the past two years. Export growth is expected to rise from 3.3 p.c. in 2005 to 3.9 p.c. in 2006 and 5.3 p.c. in 2007. Imports are expected to expand at a similar rate to exports in 2006, then more slowly in 2007, at 3.9 and 5.1 p.c. respectively. In contrast to the two preceding years, the contribution of net exports to GDP growth will thus become slightly positive, at 0.1 percentage point in the first year and 0.3 point in 2007.

CHART 2 GDP, BUSINESS SURVEY INDICATOR AND EMPLOYMENT

(Seasonally adjusted data)



Sources : NAI, NBB.
(1) Calendar adjusted data.

TABLE 1 GDP, EMPLOYMENT AND MAIN CATEGORIES OF EXPENDITURE

(Percentage changes compared to the previous year, calendar adjusted data)

	2004	2005	2006 e	2007 e
GDP[1]	2.7	1.5	3.0	2.1
Total domestic employment in persons	0.6	1.0	1.0	1.1
Real disposable income	–0.1	0.9	2.7	2.1
Components of expenditure[1]				
Final consumption expenditure of individuals	1.6	0.8	2.4	2.0
Final consumption expenditure of general government	2.1	–0.6	1.7	2.0
Gross fixed capital formation	6.9	5.2	4.7	4.0
Housing	9.0	3.5	4.6	5.0
Government investment	3.1	13.5	–2.5	–4.8
Business investment	6.7	4.8	5.8	4.8
Change in stocks[2]	0.1	0.6	0.3	–0.6
Total domestic expenditure	2.9	2.0	2.9	1.9
Net exports of goods and services[2]	–0.1	–0.4	0.1	0.3
Exports of goods and services	5.7	3.3	3.9	5.3
Imports of goods and services	6.2	4.1	3.9	5.1

Sources: NAI, NBB.
(1) In volume.
(2) Contribution to the change in GDP.

3. Prices and costs

Estimated on the basis of the HICP, total inflation, which had averaged 2.5 p.c. in 2005, should fall to 2.3 p.c. in 2006 and 1.9 p.c. in 2007. This downward trend, similar to the acceleration which went before it, reflects the movement in energy prices. In accordance with the easing of oil prices quoted on the international markets, the rise in these prices – which account for around 10 p.c. of the total HICP – should subside from 12.7 p.c. in 2005 to 0.9 p.c. in 2007.

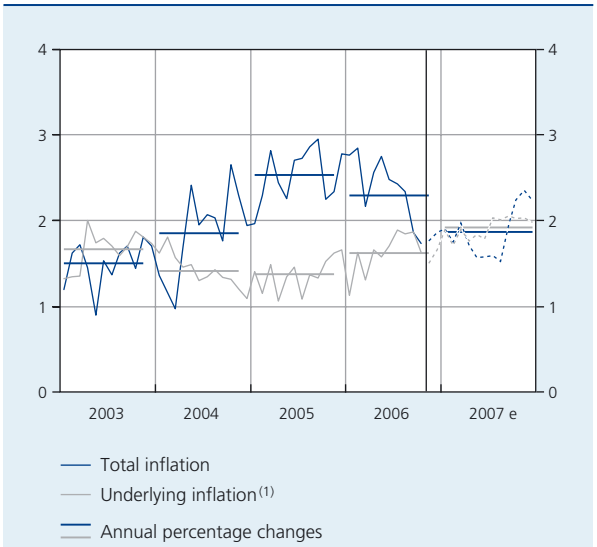
In contrast, the underlying trend in inflation edged upwards from mid 2005, as the effects of the euro's earlier appreciation faded away and the impact of the commodity price rises was passed through in the prices of industrial goods. The gradual acceleration in underlying inflation is predicted to continue during the forecast period, rising from 1.4 p.c. in 2005 to an average of 1.9 p.c. in 2007. For that last year, the introduction of the general packaging levy on 1 July 2007 and the increase in excise duty on tobacco, measures included in the 2007 budget, will probably push up inflation by 0.2 point.

Furthermore, inflation measured by the national CPI came to just 1.7 p.c. in 2006, while in previous years this inflation rate was higher than that according to the HICP, owing to the obsolescence of the weights used in the first index. This lower figure stems from the method used to revise the national CPI in January 2006. The social partners followed broadly the same method for fixing the conversion coefficient applicable to the health index, with the same effects on the change in 2006. From 2007 onwards, the inflation figures according to the HICP should be very comparable to those based on the national CPI.

Unit labour costs are expected to rise by 0.7 p.c. in 2006 and 1.2 p.c. in 2007, following an annual increase averaging 0.5 p.c. in the previous two years. Over the whole of the recent period and the forecast period, cyclical movements in labour productivity are the dominant factors influencing the change in these costs from one year to the next. That change was negative in 2004 and will be small in 2006, years in which activity quickened pace; in contrast, it was larger in 2005, reaching 1.5 p.c., owing to the meagre increase in productivity. The cyclical effects are likely to be more or less neutral in 2007. As for hourly

CHART 3 INFLATION

(HICP – percentage changes compared to the corresponding period of the previous year)



Sources : EC, NBB.
(1) Measured by the HICP excluding unprocessed food and energy.

labour costs, these are expected to maintain a steady annual rate of increase at around 2¼ p.c.

Over the period 2005-2006 as a whole, the rise is projected to reach 4.6 p.c. [1], a figure very close to the 4.5 p.c. indicative norm confirmed by the government following the central pay negotiations, but that did not prevent a further deterioration in relation to the average for the three neighbouring countries, where the increase in hourly labour costs proved smaller than initially forecast.

The 2.2 p.c. rise in hourly labour costs assumed for 2007 is a technical assumption based on the average movement in labour costs predicted for the three neighbouring countries, as prescribed by the law of 1996 on the promotion of employment and the safeguarding of competitiveness ; it therefore does not in any way anticipate the outcome of the current negotiations between the social partners.

4. Public finances

Taking account of the latest information, public finances should end the year 2006 more or less in balance. In comparison with the Bank's spring estimate, the current forecasts show an improvement in the balance totalling 0.3 p.c. of GDP, despite the cost to the budget of the decisions taken in the meantime to grant a "professional allowance" by raising the fixed professional expenses deductible against personal income tax, and to increase the family allowances at the start of the school year for children aged between 6 and 18 years. Regarding revenues, the structural acceleration in corporate tax assessments should generate additional revenues totalling 700 million euro. On the expenditure side, the cost of health care proved less than expected in the first half year. The proceeds from the sale of the Belgian embassy building in Tokyo exceeded the original forecast. In that connection, it should be mentioned that the autumn estimate still allows for a property transaction worth 0.2 p.c. of GDP which was planned for 2006 but has not yet been effected, which implies a substantial downside risk. Finally, the draft budget showing a balance was

(1) In the technical report on the maximum margins available for the movement in labour costs, published on 8 November 2006 by the Secretariat of the Central Council for the Economy, the rise in hourly labour costs is estimated at 4.7 p.c. for 2005-2006.

TABLE 2 PRICE AND COST INDICATORS

(Percentage changes compared to the previous year)

	2004	2005	2006 e	2007 e
Total HICP	1.9	2.5	2.3	1.9
of which : energy products	6.6	12.7	7.0	0.9
p.m. National ICP	*2.1*	*2.8*	*1.7*	*1.8*
GDP deflator	2.4	2.1	1.7	1.8
Labour costs in the private sector				
Unit costs	–0.4	1.5	0.7	1.2
Hourly costs	2.4	2.2	2.3	2.2

Sources : NAI, NBB.

based on GDP growth of 2.2 p.c., whereas the Bank revised that figure upwards to 2.5 p.c. in the spring projections and 3 p.c. at present.

The projection relating to the general government balance in 2007 has been upgraded significantly in comparison with the spring estimate, which still predicted a deficit of 1.2 p.c. of GDP. That improvement is attributable to the level effect caused by the slower rise in health care expenditure in 2006, the more favourable growth outlook since the spring estimate, and the impact of the autumn budgets. Turning to structural measures, these mainly concern the introduction of a general packaging levy, an increase in the excise duty on tobacco, and new measures to combat tax evasion and promote more efficient revenue collection. On the other hand, the allowance for fixed professional expenses deductible against personal income tax will be increased slightly once again. As regards non-recurring measures, which should improve the budget outcome by 0.4 p.c. of GDP, 0.2 percentage point of that is due to new property transactions by the Federal State. Also, it is temporarily more advantageous for companies to distribute or invest certain tax-exempt reserves. Furthermore, the deadline for payment of social security contributions on holiday allowances has been accelerated in the case of employment contracts which have been terminated. In addition, the investment grant for the BNRC group will be based on the actual rate of investment, which will cut expenditure in 2007. Finally, a new securitisation operation concerning direct taxes is planned. Overall, the projections now point to a deficit of 0.4 p.c. of GDP for general government in 2007.

Assuming that no new measures are taken, the budget balance will therefore deteriorate in 2007 compared to the previous year, even though interest charges will have fallen once again – albeit at a slower rate than in earlier years – and despite the reduction in local authority investment expenditure which is normal in the years following the local elections. This movement is largely due to the non-recurring measures which were taken into account in the estimate and which will have less impact than in 2006. In addition, public revenues are also expected to shrink in relation to GDP, because earned incomes – which are taxed relatively heavily – are growing more slowly than GDP.

The difference in relation to the surplus of 0.3 p.c. of GDP announced by the government for 2007 is due to various factors. Apart from some differences in the estimate of expenditure and revenue, the projections follow the ESCB methodology and take no account of budget measures

TABLE 3 GENERAL GOVERNMENT ACCOUNT[1]

(Percentages of GDP; Eurostat point of view, unless otherwise stated)

	2004	2005	2006 e	2007 e
Revenues	49.2	50.0	49.1	48.7
of which: fiscal and parafiscal revenues	44.4	44.8	44.3	44.0
Primary expenditure	44.5	48.0	45.0	45.1
Primary balance	4.7	2.0	4.1	3.6
Interest charges	4.7	4.3	4.1	4.0
Borrowing requirement (–) or capacity (Eurostat)[2]	0.0	–2.3	0.0	–0.4
Borrowing requirement (–) or capacity (NAI)[2]	0.0	0.1	–0.1	–0.4
p.m. Effect of temporary measures (Eurostat)[2]	*0.8*	*–2.0*	*0.7*	*0.4*
Effect of temporary measures (NAI)[2]	*0.8*	*0.4*	*0.7*	*0.4*
Consolidated gross debt (Eurostat)[2]	94.3	93.2	89.6	87.2
Consolidated gross debt (NAI)[2]	94.3	91.5	87.9	85.7

Sources: EC, NAI, NBB.

(1) In accordance with the methodology used in the framework of the excessive deficit procedure (EDP), which includes the net interest income generated by certain financial transactions such as swaps and forward rate agreements (FRAs).

(2) The data on Belgium's public finances which the NAI notified to the European authorities on 29 September 2006 were based on the principle that the Railway Infrastructure Fund (RIF) is not part of the general government sector. Eurostat decided to adjust these figures in its publication dated 23 October 2006, considering that the RIF should be included in the general government sector. Eurostat also took the view that the imputation of the debt to the general government sector should not be regarded as an "other change in volume" following a change in sector classification and structure, but that it constituted an assumption of debt which should be recorded as a general government capital transfer to the non-financial corporations sector. The view taken by Eurostat is reflected in a negative impact of 2.4 p.c. of GDP in 2005, but a positive – though admittedly modest – impact of 0.05 p.c. of GDP in 2006 and 2007. No account is taken of the potential effect on the general government accounts if the RIF were to be reclassified in the non-financial corporations sector in 2006.

which have not yet been specified in sufficient detail, such as the intention to take over the first-pillar pension liabilities of companies in exchange for non-recurring capital transfers, which should generate revenue totalling 500 million euro.

In 2006 and 2007, the public debt will continue gradually contracting. The debt level will fall by around 6 p.c. of GDP over those two years.

5. Assessment of the uncertainty surrounding the projections

The stronger than expected acceleration in activity at the end of 2005 and the beginning of the current year accounts for much of the 0.4 percentage point upgrading of the GDP growth figure for 2006. Apart from that, the new forecasts for Belgium are in line with those presented in the spring, predicting a rate of expansion which, though less dynamic than at the start of the year, will remain robust in 2007 and will be based on both business and household demand and demand for exports.

The recent fall in oil prices makes this risk factor less important, even though its effect on inflation in Belgium is offset by the planned increase in taxes on tobacco and packaging in 2007.

The other risk factors mentioned at the time of previous projection exercises continue to apply, particularly the persistently large current account imbalances at world level, with potential implications for exchange rates and interest rates, and the effects on German economic agents of the planned increase in indirect taxes in 2007. However, that country's economic recovery now appears equally solid, and business and consumer confidence has shown a particularly marked improvement there.

Incorporating the recent national accounts figures, the Bank's forecasts show GDP growth in 2006 as slightly higher than the figures published since the autumn by the NAI and the international institutions. The other figures fall in the middle of the predicted range. That range is fairly narrow, reflecting a broad consensus among forecasters.

TABLE 4 COMPARISON OF THE FORECASTS FOR BELGIUM

(Percentage changes compared to the previous year, unless otherwise stated)

	Real GDP		Inflation (1)		Budget balance (2)		Date of publication
	2006	2007	2006	2007	2006	2007	
NBB – Autumn 2006	3.0	2.1	2.3	1.9	0.0	–0.4	December 2006
p.m. Spring 2006	*2.5*	*2.0*	*2.4*	*1.9*	*–0.3*	*–1.2*	*June 2006*
NAI	2.7	2.2	1.9 (3)	1.9	–	–	October 2006
IMF	2.7	2.1	2.4	1.9	0.0	–0.7	September 2006
EC	2.7	2.3	2.4	1.8	–0.2	–0.5	November 2006
OECD	2.9	2.3	2.4	1.7	0.0	–0.2	November 2006
Belgian Prime News	2.7	2.0	2.3	2.0	–0.1	–0.6	September 2006

(1) HICP, except NAI: national consumer price index.
(2) Percentages of GDP.
(3) The introduction in January 2006 of the new national consumer price index results in a 2006 inflation figure which is estimated to be 0.5 point lower when measured by the national index as opposed to the HICP.

Annex

PROJECTIONS FOR THE BELGIAN ECONOMY: SUMMARY OF THE MAIN RESULTS

(Percentage changes compared to the previous year, unless otherwise stated)

	2003	2004	2005	2006 e	2007 e
Growth (calendar adjusted data)					
GDP in volume	1.0	2.7	1.5	3.0	2.1
Contributions to growth:					
Domestic expenditure, excluding change in stocks	0.9	2.7	1.3	2.6	2.3
Net exports of goods and services	0.2	–0.1	–0.4	0.1	0.3
Change in stocks	0.0	0.1	0.6	0.3	–0.6
Prices and costs					
Harmonised index of consumer prices	1.5	1.9	2.5	2.3	1.9
Health index	1.5	1.6	2.2	1.7	1.9
GDP deflator	1.6	2.4	2.1	1.7	1.8
Terms of trade	–0.3	–0.2	–1.0	–0.3	–0.2
Unit labour costs in the private sector	0.0	–0.4	1.5	0.7	1.2
Hourly labour costs in the private sector	1.5	2.4	2.2	2.3	2.2
Hourly productivity in the private sector	1.5	2.8	0.7	1.6	1.0
Labour market					
Domestic employment (annual average change in thousands of units)	0.6	26.5	40.8	44.0	45.0
Harmonised unemployment rate[1] (p.c. of the labour force)	8.2	8.4	8.4	8.5	8.3
Incomes					
Real disposable income of individuals	–0.8	–0.1	0.9	2.7	2.1
Savings ratio of individuals (p.c. of disposable income)	14.4	13.2	13.2	13.4	13.5
Public finances[2]					
Primary balance (p.c. of GDP)	5.4	4.7	2.0	4.1	3.6
Borrowing requirement (–) or capacity of general government (p.c. of GDP)	0.0	0.0	–2.3	0.0	–0.4
Public debt (p.c. of GDP)	98.6	94.3	93.2	89.6	87.2
Current account (p.c. of GDP according to the balance of payments)	4.1	3.5	2.5	1.9	1.9

Sources: EC, NAI, NSI, NBB.

(1) Adjusted series (Eurostat).

(2) In accordance with the method used for the excessive deficit procedure (EDP), and taking account of Eurostat's decision dated 23 October 2006 (see table 3).

The financial situation of Belgian non-financial corporations

S. Cappoen
M.-D. Zachary

Introduction

As entities where the production process takes place, non-financial corporations deserve our full attention in the analysis of real and financial accounts. However, examination of the financial behaviour of non-financial corporations is traditionally confined to their financing: thus, the Bank's annual report generally only considers their liabilities.

Yet the formation of financial assets by non-financial corporations is a significant item of information, in both statistical and economic terms. Total financial assets held by non-financial corporations in Belgium are considerable, as they far exceed the total financial assets of households. A study recently revealed the historically high level of financial asset formation by non-financial corporations in the main industrialised countries, a factor which could help to explain the relatively low level of long-term interest rates.

It therefore makes good sense for this article to take a close look at asset formation by non-financial corporations in Belgium.

The article is divided into three sections.

The first section offers a general picture of the financial situation of non-financial corporations. It first describes the importance of their assets and liabilities in the Belgian economy. It then analyses the financial balances – in terms of both real and financial accounts – of these non-financial corporations and compares them with those of their foreign counterparts.

The second section is devoted to analysis of the formation of financial assets by non-financial corporations in Belgium. It first examines new transactions in detail, and compares the overall trend with that for the euro area. Next it looks at the total outstanding volume of financial assets. That analysis in fact makes it possible to identify the specific activities of certain economic agents.

The third section, which examines the liabilities of non-financial corporations, follows the same general approach as the analysis of asset formation. New liabilities are first examined and compared with the trend in liabilities in the euro area in general. A more detailed analysis of the financing of non-financial corporations in Belgium then follows. Once again, the analysis of the outstanding totals makes it possible to identify some significant underlying factors.

1. General overview

1.1 The importance of the assets and liabilities of non-financial corporations in the Belgian economy

The household sector, which had net financial assets of around 648 billion euro at the end of 2005, is the Belgian economy's only creditor sector. It finances the other two resident non-financial sectors and the rest of the world. In 2005, non-financial corporations represented the largest debtor sector. Their net financial liabilities totalled around 302 billion euro. However, excluding shares and other equity – a major source of their net funding – the net

liabilities of non-financial corporations came to around 49 billion euro.

Non-financial corporations also constitute the resident non-financial sector with the highest gross financial assets and liabilities. Thus, their gross outstanding assets totalled 833 billion euro at the end of 2005, a figure well in excess of the asset portfolio of households (784 billion euro), although that receives more attention in the analysis of the financial accounts.

The general government debt came to a net total of 241 billion euro, while the net financial liabilities of the rest of the world totalled just over 104 billion euro. Conventionally, financial corporations have no net financial assets, despite their position at the heart of the financial system.

The statistics analysed above are outstanding totals which express the value of the assets and liabilities at a given moment. More traditionally, the analysis of the financial accounts concerns new assets or liabilities, i.e. the flows of funds taking place over a given period. A number of methodological differences explain why the change in the outstanding total may be completely different from the flows of funds during the period considered.

From a methodological point of view, the change in the outstanding total from one period to the next depends not only on these flows of funds, but also on price adjustments relating to successive outstanding totals and other volume changes. These factors are particularly important for equities, a vital source of funding for non-financial corporations. As regards price adjustments, the outstanding total of unquoted shares is thus assessed at the value of the shareholders' equity. That figure is calculated as a balance by deducting the shareholders' equity of listed companies from the shareholders' equity of all Belgian companies. The outstanding total of quoted shares is assessed on the basis of market capitalisation.

The price effects (and other volume changes) which correspond to the difference between the official outstanding total and a theoretical outstanding total, calculated on the basis of an initial outstanding total to which are added the successive issue flows, may therefore be considerable. In the case of quoted shares, they were decidedly positive between 1995 and 1998, a period when Belgian stock market indices were rising rapidly and many companies were going public. Conversely, from 1999 to 2002, negative price effects materialised as share prices collapsed and some large Belgian companies were delisted. Since 2003, the recovery of Belgian share prices has once again generated positive price effects. Financial instruments other than equities (loans and fixed-income securities) have been valued in the same way in regard to flows and outstanding totals, namely at their book value, which greatly limits the possibility of any resulting price effects.

The statistics on the flows of quoted or unquoted share issues include cash contributions made when a company is formed or its capital is increased, and cash issue premiums at the time of an increase in capital, from which are deducted any capital reductions in the form of repayments to shareholders. Contributions in kind[1], delistings, bankruptcies and initial public offerings without the issue of new shares do not affect the flow statistics, but are included – as other volume changes – in the outstanding total statistics.

(1) Except in the case of listed companies.

TABLE 1 FINANCIAL ASSETS AND LIABILITIES BY SECTOR IN 2005

(Outstanding total at the end of the year, billions of euro)

	Financial assets	Financial liabilities	Net financial assets
Households	784.0	136.1	647.9
Non-financial corporations	833.4	1,135.8	–302.3
General government	76.9	318.3	–241.4
Financial corporations[1]	1,556.4	1,556.4	0.0
Rest of the world	1,215.5	1,319.7	–104.2

Source: NBB.

(1) Financial corporations comprise mainly the NBB, credit institutions and institutional investors. These institutions are treated as pure financial intermediaries: by construction, their financial assets equal their financial liabilities.

1.2 The balances of non-financial corporations

The financial situation of non-financial corporations can be deduced from the financial account statistics, which relate exclusively to financial transactions and are based on purely financial data (balance sheets of banking institutions and institutional investors, data relating to issuing activities on the financial markets, etc.).

Under the European System of National Accounts (ESA 1995), however, the financial accounts form the final component of the system of accounts. They come after the real accounts, which present the income and expenditure of the various sectors. The financial balance of non-financial corporations is deduced from the capital account in their non-financial (sectoral) accounts. The financial accounts reveal the way in which non-financial corporations use their surpluses and finance their deficits.

Table 2 shows how to make the transition from the capital account to the financial account. The gross savings of non-financial corporations (i.e. the gross disposable income adjusted for changes in provisions for pension insurance) and capital transfers (mainly investment aid) are the resources available in the capital account. These resources are used to acquire non-financial fixed assets (mainly investments and, to a lesser extent, stock formation). While the resulting financial balance may indicate a financial surplus, the non-financial corporations more often present a financial deficit. A financial deficit on the capital account should be reflected in a net borrowing requirement in the financial account. The net borrowing requirement corresponds to the net difference between the formation of financial assets and new financial liabilities of firms. However, during the period under review, this net borrowing requirement in the financial account generally exceeded the financial deficit in the capital account. It therefore seems that there is a major discrepancy between these two types of statistics; that is due, in particular to differing sources and valuation methods, and to statistical inconsistencies.

A similar difference is apparent in almost all European countries, so that there is therefore also a discrepancy for non-financial corporations in the euro area[1]. In some countries, the capital account balance is higher than the financial account balance, whereas the opposite is true in other countries. During the period 2001-2004, the non-financial corporations sector in the euro area recorded, on average, a financial deficit of 1.1 p.c. of GDP, since investments in non-financial fixed assets exceeded the available resources (gross savings). The same applies in Belgium, albeit to a smaller extent, where the financial deficit came to 0.3 p.c. of GDP.

(1) This article considers the whole of the euro area except Ireland and Luxembourg, which do not publish any financial accounts. No information is available as yet for 2005 on the capital accounts for the euro area as a whole.

TABLE 2 CAPITAL ACCOUNT AND FINANCIAL ACCOUNT OF NON-FINANCIAL CORPORATIONS IN BELGIUM

(Billions of euro)

	2001	2002	2003	2004	2005
Capital account					
Gross savings[1]	30.3	29.6	31.6	35.4	35.7
Acquisitions of non-financial assets[2]	32.4	30.2	32.0	36.0	38.4
Financial balance: financial surplus (+) or deficit (–)	–2.2	–0.5	–0.4	–0.6	–2.8
Financial account					
Formation of financial assets	62.3	28.1	53.7	28.6	11.4
New financial liabilities	72.0	30.1	56.9	31.6	12.7
Net borrowing requirement (–) or capacity (+)	–9.6	–2.0	–3.2	–3.0	–1.3
Statistical variation between the capital account and the financial account	–7.5	–1.5	–2.8	–2.5	1.5

Sources: Eurostat, NBB.
(1) Including net capital transfers.
(2) Comprises gross fixed capital formation, change in stocks and balance of purchases and sales of non-produced, non-financial assets.

TABLE 3 CAPITAL ACCOUNT AND FINANCIAL ACCOUNT OF NON-FINANCIAL CORPORATIONS: AVERAGES DURING THE PERIOD 2001-2004

(Percentages of GDP)

	Belgium	Euro area (1)
Capital account		
Gross savings (2)	11.6	9.6
Acquisitions of non-financial assets (3)	12.0	10.6
Financial balance: financial surplus (+) or deficit (–)	–0.3	–1.1
Financial account		
Formation of financial assets	16.0	7.2
New financial liabilities	17.7	8.6
Net borrowing requirement (–) or capacity (+)	–1.7	–1.3
Statistical variation between the capital account and the financial account	–1.3	–0.3

Sources: Eurostat, NBB.

(1) Excluding Ireland and Luxembourg.

(2) Including net capital transfers.

(3) Comprises gross fixed capital formation, change in stocks and balance of purchases and sales of non-produced, non-financial assets.

The difference between the financial balances of Belgium and those of the euro area is not due to their respective investment behaviour. Following a slight fall in 2002, the gross investments of Belgian firms increased steadily to reach an average of around 12 p.c. of GDP between 2001 and 2004. In the euro area, investments were slightly lower, averaging 10.6 p.c. of GDP during the same period. The smaller financial deficit of Belgian non-financial corporations is therefore due more to the fact that gross savings (disposable income) are higher in Belgium than in the euro area as a whole. Also, both the formation of financial assets and the new financial liabilities of non-financial corporations in Belgium, expressed as percentages of GDP, were considerably higher than in the euro area. This aspect will be explained later.

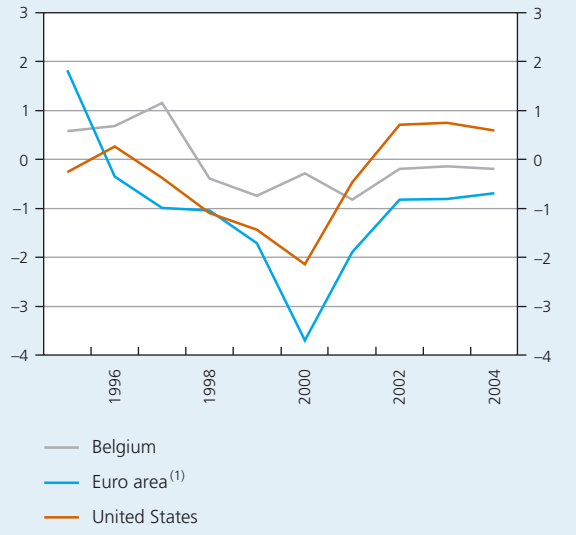
Comparison of the financial balance in Belgium with that of the euro area as a whole, and that of the United States over a longer period, namely 1995-2004, immediately reveals that in 2000 the financial balance of the euro area was indeed more negative than that of Belgium. In that year, the UMTS licences were in fact auctioned by the authorities of several European countries. A number of telecommunications companies then paid a high price for a licence. Owing to these heavy investments, non-financial corporations in general presented a large financial deficit in those countries. Thus, investment in UMTS licences in Germany represented 2.5 p.c. of GDP. In contrast, Belgium waited until 2001 before organising a similar auction, and the operation raised only 0.2 p.c. of GDP for the national authorities. Consequently, the corresponding investment for non-financial corporations was much smaller than in the other European countries. Except in the year 1995, Belgian non-financial corporations have always had a higher financial balance than their counterparts in the euro area.

The financial balance in the euro area declined between 1995 and 2000, before resuming an upward trend in the following years. This pattern appears to be common to all the industrialised countries; in the United States, non-financial corporations have actually recorded a financial surplus since 2002. In other words, in the United States companies are making bigger profits, which are then allocated not to investment in fixed assets (or stocks) but to the formation of financial assets or the reduction of financial liabilities (mainly by repaying debts)(1). The decline in the financial balance at the end of the 1990s coincided with the stock market boom during that same period. Following that decline and the interest rate cuts,

(1) As in the European countries, there is a significant disparity in the United States between the capital account and the financial account. Thus, the capital account of non financial corporations showed a smaller financial surplus than the financial account in 2004.

CHART 1 FINANCIAL BALANCE: FINANCIAL SURPLUS (+) OR DEFICIT (–)

(Percentages of GDP)



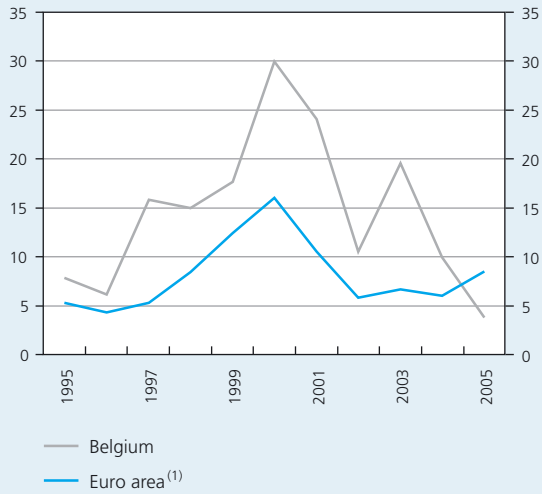
Sources: Eurostat, Federal Reserve, NBB.

(1) Excluding Ireland and Luxembourg.

firms (and especially those active in the ICT sector) found it relatively easier to obtain new capital and to make substantial investments. Following the stock market crash in 2000, firms were more reticent to use their gross savings for that purpose. Those savings were less likely to be used for investing in fixed assets and were devoted more to forming financial assets or honouring financial liabilities. In addition, a number of studies – such as those by the IMF (2006) and the ECB (September 2006) – showed that non-financial corporations in the leading industrialised countries were forming more financial assets (and more particularly liquid assets) than in the past. Except during 2000 and 2001 (owing to the UMTS licences), the financial balance of Belgian non-financial corporations follows the same pattern as the financial balances of the euro area and the United States, although the movement is less marked. The question is therefore whether non-financial corporations in Belgium are also accumulating more financial assets. In order to study that aspect, the assets and liabilities of Belgian non-financial corporations are examined in detail below, and compared with those of their counterparts in the euro area.

CHART 2 FORMATION OF FINANCIAL ASSETS BY NON-FINANCIAL CORPORATIONS

(Flows, percentages of GDP)



Sources: Eurostat, NBB.
(1) Excluding Ireland and Luxembourg.

2. Trend in the financial assets of non-financial corporations in Belgium

2.1 New financial assets

Except in 2005, the formation of financial assets (flow statistics) by Belgian non-financial corporations, expressed as a percentage of GDP, has always exceeded the figure for the euro area since 1995. Both in Belgium and in the euro area as a whole, an upward trend prevailed between 1996 and 2000 and a downward trend was recorded from 2000 onwards. In the case of the euro area, that trend is due mainly to equity transactions; in Belgium, the flows exhibit greater volatility, due essentially to claims. During the period 1995-2005, around 70 p.c. of the formation of financial assets by Belgian non-financial corporations consisted of claims on foreign and resident non-financial corporations.

However, these flows of financial assets and liabilities also include the financial transactions of coordination centres and non-financial holding companies. Although a good many coordination centres engage mainly, but not exclusively, in financial activities, they form part of the financial accounts of the non-financial corporations sector. Moreover, the main task of non-financial holding companies is to hold controlling (financial) interests in other non-financial corporations. The ESA 1995 also considers these companies to be non-financial corporations. In order to make an accurate comparison between the structure of non-financial corporations in Belgium and those in the euro area, it is necessary to exclude the non-financial holding companies and coordination centres peculiar to Belgium. However, this correction may be overdone: some countries in the euro area also host companies which, from the point of view of the role they play, can be regarded as similar to coordination centres and non-financial holding companies in Belgium. Nevertheless, they are much less important. Since the financial accounts do not contain separate data on coordination centres and non-financial holding companies, the annual accounts of the Central Balance Sheet Office were used to extract that information from the annual accounts filed. The annual accounts offer a fairly accurate picture of the annual outstanding total of the various instruments. However, it is difficult to calculate the financial flows from the annual accounts (owing to valuation differences, reclassifications, etc.). The analysis was therefore conducted on the outstanding totals.

(1) For a more detailed description of the status of coordination centres and non financial holding companies, see Minne and Douénias (2004).

Coordination centres

Coordination centres are undertakings established in Belgium and forming part of a multinational group; their sole object is to provide certain services in the sphere of financing, cash flow management, accounting, consultancy, factoring, etc. for other companies belonging to the same group. They frequently act as an "internal banker" within a multinational group.

By way of exception from the ordinary tax rules, the taxable income of the coordination centres was fixed in 1983 as a flat percentage of the operating costs ("cost plus" method). The coordination centres were also exempted from the withholding tax on income from immovable property, from registration duties on capital contribution and from the obligation to deduct tax at source on income distributions. To gain approval as a coordination centre, a company was required, among other things, to belong to a multinational group with subsidiaries in at least four different countries; it could not hold any shares in other companies and had to meet a range of minimum requirements regarding equity capital and turnover.

The European Commission took the view that the regulations applied to coordination centres were no longer compatible with the current State aid rules, and that Belgium should therefore rescind them. That is why Belgium is no longer recognising any new coordination centres, and this category of undertaking will be abolished by 2010 at the latest. The risk that the coordination centres may be relocated is one of the reasons prompting the government to introduce the tax system comprising the notional interest allowance.

Non-financial holding companies

Holding companies are companies whose main object is to manage investments in other companies. Only non-financial holding companies are considered in this study. Companies which mainly hold shares in financial corporations (such as credit institutions and insurance companies) are regarded by the ESA 1995 as financial holding companies and classified in the financial sector.

However, there are several categories of non-financial holding companies which often perform different functions. Some holding companies supervise a range of subsidiaries. A pyramid structure of sub-holding companies, enabling the parent company to create and control an extensive network of subsidiaries with relatively limited capital, is sometimes seen. Other holding companies specialise in granting venture capital, particularly for new businesses. They are sometimes listed on the stock market, enabling small investors to take advantage of the portfolio diversification and expertise of the managers. The holding company structure is also used to plan the succession of a firm's founder(s) and/or shareholder(s).

The success of holding companies in Belgium is due to the favourable fiscal conditions. The Participation Exemption Regime grants a 95 p.c. tax exemption for the recipient company on dividends which have already been taxed at the company paying them, if certain conditions are met. In addition, capital gains on equities realised by Belgian companies are also tax exempt, subject to certain conditions.

2.2 Outstanding total of financial assets held by Belgian non-financial corporations

The outstanding total of financial assets held by Belgian non-financial corporations grew from 128 p.c. of GDP in 1995 to 280 p.c. in 2005. The biggest increase concerns financial assets in the form of equities and claims.

Equities rose from 58 p.c. to 135 p.c. of GDP. They do not only represent portfolio investments, which offer no scope for control, but also – and predominantly – participating interests in other companies, both in Belgium and abroad.

During the same period, claims increased from 34 p.c. to 116 p.c. of GDP. These do not include trade receivables, which are shown separately under the ESA 1995 in the "Other" item. They consist solely of non-trade receivables, i.e. loans granted to other non-financial corporations and/or to other sectors of the economy or to other countries. These financial loans are mostly granted by Belgian coordination centres. They thus finance other undertakings within the multinational group to which they belong.

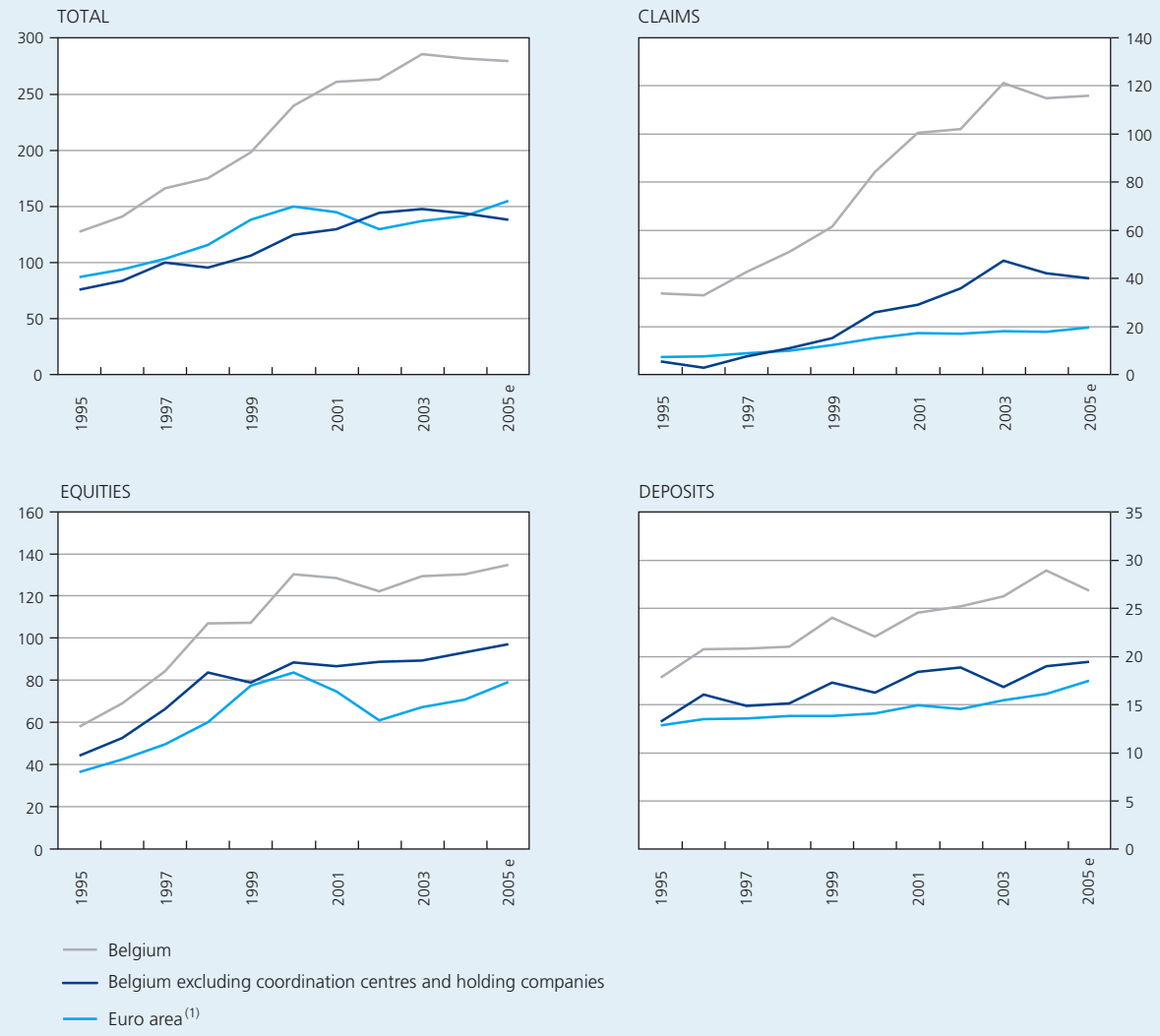
Deposits formed with credit institutions also increased, though to a lesser extent. Other financial instruments, such as fixed-income securities and transitory items, are less important and are disregarded here.

The increase in these outstanding totals, expressed as percentages of GDP, is due partly to the formation of more new financial assets and partly to the higher valuation of the various instruments. This price effect mainly influences equities, and more particularly those quoted on the stock market.

The movement in stock market prices (an increase from 1995 to 2000, a fall until 2002, followed by a steady recovery) is more clearly reflected in the outstanding total of shares held by non-financial corporations in the euro area as a whole than in the corresponding outstanding total for Belgian companies. There are two reasons for this situation. First, the ratio between quoted and unquoted

CHART 3 FINANCIAL ASSETS HELD BY NON-FINANCIAL CORPORATIONS

(Outstanding totals, end of period, percentages of GDP)



Source : Eurostat, NBB.
(1) Excluding Ireland and Luxembourg.

shares is higher in most European countries than in Belgium. Also, in some euro area countries, unquoted shares are recorded at market value. That value, estimated on the basis of ratios for quoted shares, tracks the stock market fluctuations to some extent, and is generally higher than the book value. Despite these differences of method, non-financial corporations in the euro area hold far fewer shares, in percentages of GDP, than non-financial corporations in Belgium (79 p.c. against 135 p.c. in 2005). The Belgian non-financial corporations sector in fact includes non-financial holding companies. The inclusion of numerous holding (and any sub-holding) companies in the non-financial corporations sector artificially increases the outstanding total of shares held in Belgian companies.

Since the claims on the assets side of non-financial corporations are much higher in Belgium than in the euro area as a whole (116 p.c. of GDP against 20 p.c. in 2005) because of the presence of the coordination centres, the Belgian non-financial corporations hold financial assets which, in percentages of GDP, are almost twice as large as those of non-financial corporations in the euro area as a whole (280 p.c. against 155 p.c.) in 2005.

Nonetheless, this difference is negative if the assets held by Belgian coordination centres and non-financial holding companies are disregarded, as that halves the assets held by Belgian non-financial corporations to 138 p.c. in 2005. The differences of level for each instrument taken separately also decline very significantly.

The movement in the total financial assets of Belgian non-financial corporations, excluding holding companies and coordination centres, is also similar to that for non-financial corporations in the euro area. In percentages of GDP, Belgium records a rise from 76 to 138 p.c. and the euro area figure increases from 87 to 155 p.c. It is only during the years 1998 to 2002 that the influence of the stock market boom and the ensuing correction were more apparent in the figures for the euro area. That becomes even more obvious if the data on shares are viewed separately.

The movement in the outstanding total of shares held by Belgian companies, excluding non-financial holding companies and coordination centres[1], parallels that of the euro area data between 1995 and 1998; it then diverges. The outstanding total of shares held by Belgian non-financial corporations, excluding non-financial holding companies, increases constantly while the outstanding total of shares on the assets side of non-financial corporations in the euro area tracks the trend on the stock market. The reason is that the shares held by Belgian non-financial corporations are primarily unquoted shares, the prices of which are less volatile.

The claims of Belgian non-financial corporations excluding the coordination centres are well below the figures which include the coordination centres, namely 40 p.c. against 116 p.c. in 2005. In comparison with the figures for the euro area, a more noticeable increase is apparent from the year 2000. This means that a number of Belgian non-financial corporations which are not coordination centres are making financial loans available to other companies.

During the period under review, deposits (including notes and coins) of Belgian non-financial corporations, excluding the coordination centres and non-financial holding companies, always exceeded the deposits of non-financial corporations in the euro area in percentages of GDP. In both Belgium and the euro area, there is a small rise, in percentages of GDP, between 1995 and 2005, but no clearly stronger increase after the year 2000, in contrast to the findings of some studies covering a number of industrialised countries.

However, the fact that non-financial corporations held liquid assets for almost 20 p.c. of GDP in 2005 merits further attention.

In the financial accounts, deposits and notes and coins always have as the counterparty a credit institution or central bank, by definition. This increase is therefore not due directly to intra-group transactions. In financial theory, there are two alternative hypotheses explaining why companies adjust their liquid assets. According to the theory of passive cash adjustment, the quantity of cash held is due to movements affecting income and investments, and it is only in the longer term that the company makes adjustments. An expansion in deposits could then be explained by higher profits and/or lower investments.

Conversely, the active theory (Opler et al., 1999) assumes that companies tend to minimise the opportunity cost of holding cash. Apart from the need to hold a certain quantity of cash at all times for effecting transactions, companies try – according to this hypothesis – to limit the risk of a cash shortage caused by disappointing results. They thus avoid missing an investment opportunity or having to resort to external financing which is more expensive. Consequently, increased volatility (uncertainty) in the forecast results of a business may prompt them to hold more cash.

(1) The coordination centres exert hardly any influence since, in principle, they cannot hold participating interests.

It is sometimes also suggested that a larger proportion of intangible fixed assets on the corporate balance sheet encourages firms to hold more cash. Unlike tangible fixed assets (buildings, etc.), intangible assets (brands, patents) cannot be used as collateral for loans, so that it is necessary to hold more liquid assets to cushion cash flow deficits (Passov, 2003).

However, there is a possibility of a certain substitution effect whereby companies hold short-term claims as liquid assets (e.g. against a coordination centre) rather than deposits. The liquidity of corporate assets exerts a negative influence on the outstanding total of liquid assets held (Ferreira and Vilela, 2004).

The financial accounts can also provide information on the counterparties of the financial assets of non-financial corporations. However, it is not possible to isolate the data for coordination centres and non-financial holding companies (the annual accounts give hardly any information on the counterparty sectors). For countries in the euro area, the information available is also insufficient. For Belgian non-financial corporations as a whole, the increase in the foreign financial assets is proportionately greater than the increase in Belgian assets.

In 1995, 28 p.c. of claims (which largely represent the transactions of the coordination centres) were held against other countries. In 2005, that figure reached 37 p.c. In the case of equities, too, there was a strong rise in the holding of participating interests both in Belgium and abroad. However, the growth is more marked for foreign interests. While in 1995, 22 p.c. of shares recorded as assets by non-financial corporations were shares in foreign companies, that proportion had increased to 38 p.c. by 2005. This rise was particularly apparent from 2002 onwards. As already mentioned, these share transactions often concern controlling interests. Non-financial corporations therefore effect proportionately more foreign direct investments. That is evidence of a clear trend towards internationalisation in the financial transactions of non-financial corporations, which are becoming steadily more integrated into a global economy. However, it should be remembered that tangible investments (in land and buildings) effected by Belgian firms in other countries are considered to be purely financial, according to the national accounts methodology.

3. Trend in the financial liabilities of non-financial corporations

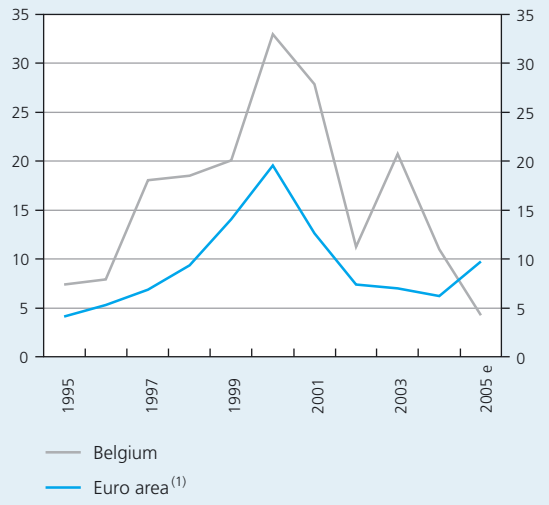
3.1 New financial liabilities

In the past ten years, the trend in the volume of new financial liabilities of non-financial corporations, expressed in p.c. of GDP, has followed a similar pattern in Belgium and the euro area. There was a steady increase in the flows between 1995 and 2000, followed by a marked contraction between 2000 and 2002. After that, in the euro area, between 2002 and 2005, the level of new liabilities remained stable, then increased again at the end of the period, whereas in Belgium it continued to decline between 2003 and 2005. The movement in the new financial liabilities, in both the euro area and Belgium, is due mainly to the movement in loans and equities (ECB, May 2006). The pattern of share issues parallels the stock market fluctuations of the past decade and their impact on the cost of capital.

Compared to the picture for the euro area as a whole, the volume of new financial liabilities, expressed in percentages of GDP, is greater in Belgium throughout the reference period, except for the year 2005. As in the case of the assets, this situation reflects the presence of the coordination centres and non-financial holding companies in Belgium.

CHART 4 NEW FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

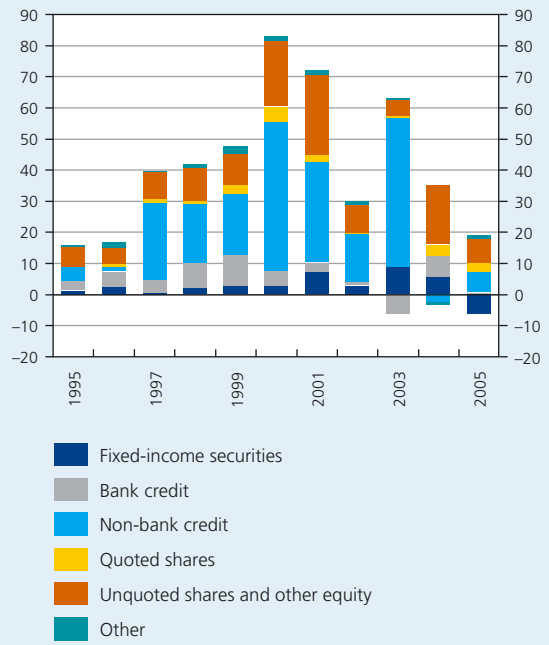
(Flows, percentages of GDP)



Sources: Eurostat, NBB.
(1) Excluding Ireland and Luxembourg.

CHART 5 NEW FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS : BREAKDOWN BY INSTRUMENT

(Flows, billions of euro)



Source : NBB.

Looking at the volume of new financial liabilities of Belgian companies, it is apparent that, at the beginning of the period (1995-1996), the flows were relatively modest, with amounts in the order of 17 billion euro. They increased rapidly in the following three years (1997-1999), mainly as a result of the accelerating rate of both bank and non-bank credit expansion. Over this period, non-financial corporations had contracted new liabilities totalling 43 billion euro, on average. During the years 2000 and 2001, the volume of issues of unquoted shares and other equity increased, with continuing sustained recourse to loans. These developments helped to boost the volume of new liabilities of non-financial corporations to an average of 77 billion euro during those two years. From 2002, net new liabilities showed a decline.

Loans have been the main financing tool used by non-financial corporations over the past ten years, except in the years 2004 and 2005. Firms mainly had recourse to non-bank credit, most of it consisting of loans between undertakings, whether or not belonging to the same group. The scale of these intersectoral flows is impressive. From 1995 to 2005, they averaged around 20 billion euro per annum, or almost half of the average new liabilities of non-financial corporations. The presence of the coordination centres in Belgium is the primary reason for this situation, plus to a lesser extent the presence of the non-financial holding companies.

The analysis of bank credit reveals the following points : after a period of growth from 1995 to 1999, the flow of lending to non-financial corporations by Belgian and foreign credit institutions slowed down and actually became negative in 2003. It subsequently recovered. More recently, the drop in bank credit to non-financial corporations in 2005, compared to 2004, has contrasted with the situation prevailing in the euro area, where this lending has gradually accelerated (NBB, 2006). According to the available indicators (constant decline in the utilisation rate of credit since mid 2004, downward trend in demand for credit originating from non-financial corporations), this situation in Belgium is probably due to demand factors.

Finally, with regard to equities, it is evident that during the period from 1995 to 2005, there have been wide fluctuations in issuance over time, in the case of both quoted and unquoted shares [1]. Firms are in fact very aware of the relative costs of the various forms of financing available to them. The role of equities in the financing of companies in Belgium was analysed in detail in a previous issue of the Economic Review (September 2006). We refer the interested reader to that article.

3.2 Outstanding total of financial liabilities of non-financial corporations

Between 1995 and 2005, the outstanding total of the financial liabilities of non-financial corporations located in Belgium grew rapidly, expanding from 197 p.c. of GDP at the end of 1995 to 381 p.c. of GDP at the end of 2005. Over the same period, the financial liabilities of firms in the euro area grew from 149 to 244 p.c. of GDP.

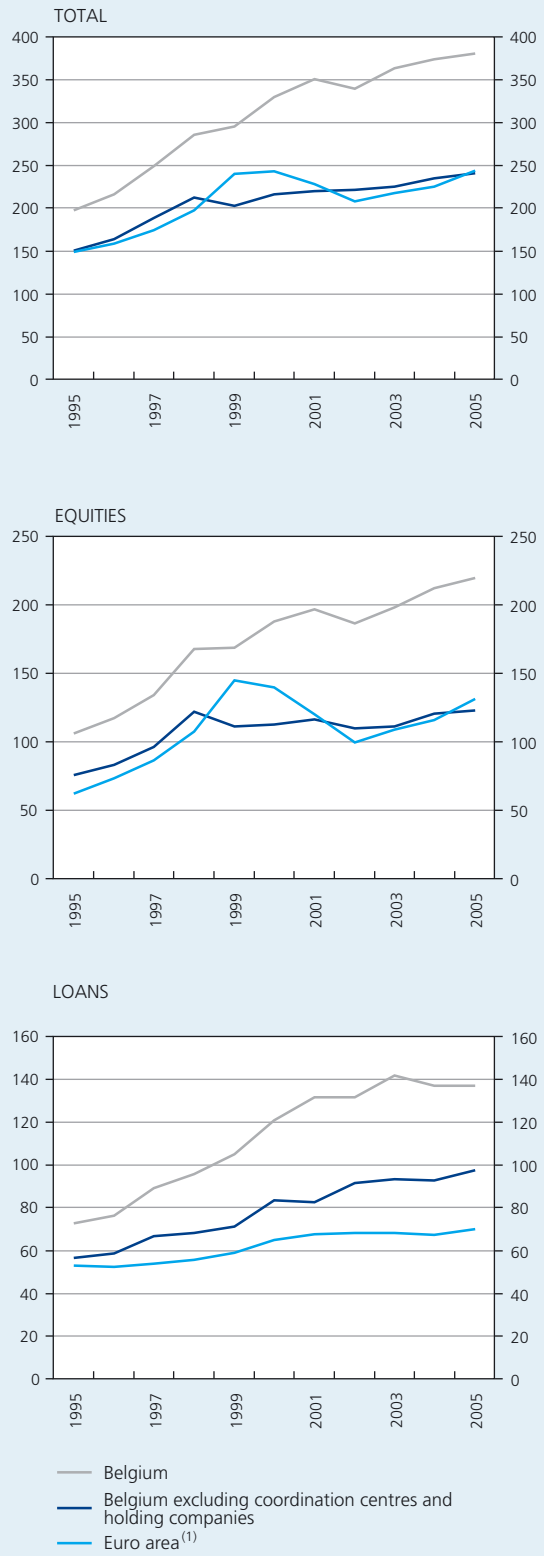
In Belgium, the growth of financial liabilities is determined primarily by the scale of equity issuance and debts recorded as corporate liabilities. In the euro area, the movement in the outstanding total of equity issuance is a major factor influencing the total financial liabilities of firms.

As in the case of assets, the growth of the financial liabilities of Belgian non-financial corporations is distorted by the presence of numerous coordination centres, which concentrate in particular on the financing and cash management operations of multinational groups, and non-financial holding companies which are also used to channel funding to Belgian companies.

(1) The flows of unquoted share issues mirror very closely the trend in quoted share issues, suggesting that they are determined by the same factors.

CHART 6 FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

(Outstanding totals, end of period, percentages of GDP)



Sources : Eurostat, NBB.
(1) Excluding Ireland and Luxembourg.

The liabilities of these two types of companies underlying numerous financing transactions have in fact shown sustained growth over the past ten years, rising from 101 billion euro at the end of 1995 to 417 billion euro at the end of 2005. They consist mainly of equities in the case of non-financial holding companies, and equities and loans in the case of the coordination centres. If the data relating to the coordination centres and non-financial holding companies are excluded from the total outstanding liabilities of Belgian non-financial corporations, the trend and level which emerge are similar to those recorded in the euro area. The stronger growth of the financial liabilities in the euro area during 1999 and 2000 is due to the intense stock market activity at that time. In Belgium, where unquoted shares predominate, the same phenomenon is not apparent.

Broadly speaking, the findings are the same if one considers the two main financing instruments of non-financial corporations, namely equities and loans. Expressed in percentages of GDP, the volume and trend for equities are similar to those seen in firms in the euro area, if the coordination centres and non-financial holding companies are excluded. Where loans are concerned, the presence of these two types of companies once again causes some distortion in the picture for the past ten years. If their data are excluded from the figures for other non-financial corporations, the profile of the outstanding total loans on the liabilities side of Belgian firms tallies more closely with that of firms in the euro area.

As regards the various financing channels used by Belgian firms, equity finance is the principal source. Over the past decade, while the proportion of quoted shares in corporate liabilities fluctuated in line with stock market activity, the proportion of unquoted shares and other equity increased steadily in relation to GDP. As already explained, the coordination centres – financed mainly by equity – are partly responsible for the strong growth of shares on corporate balance sheets.

The loans recorded as corporate liabilities have also risen in the past ten years. They consist mainly of non-bank credit, which represented 38 p.c. of GDP in 1995, but totalled 96 p.c. of GDP, or 287 billion euro, by the end of 2005. The share of bank credit has remained relatively stable in the past decade, accounting for around 40 p.c. of GDP.

The structure of the financial liabilities of Belgian non-financial corporations therefore changed somewhat between 1995 and 2005. Equities clearly gained in importance : having represented 54 p.c. of total financial liabilities in 1995, they amounted to 58 p.c. in 2005.

However, quoted shares became less important (representing only 10 p.c. of corporate liabilities in 2005, against 13 p.c. in 1995), while unquoted shares and other equity gained ground, representing 47 p.c. of GDP in 2005 (against 41 p.c. in 1995).

The share represented by loans was more or less the same in 1995 (37 p.c. of total financial liabilities) and in 2005 (36 p.c.). But here, too, it is necessary to distinguish between bank and non-bank credit. In 1995, these two types of credit represented more or less equal shares (18 p.c. and 19 p.c. of the total), but in 2005, non-bank credit accounted for 25 p.c. of the financial liabilities, against 11 p.c. for bank credit.

The share of the various counterparty sectors in the financing of Belgian firms has also changed. In 2005, the latter obtained finance mainly from other non-financial corporations and the rest of the world, totalling 442 and 445 billion euro respectively. These were also the two sectors where corporate financial liabilities have shown the largest increase in the past ten years. The share of other non-financial corporations and the rest of the world in corporate financing was in fact proportionately greater in 2005 than in 1995. Whereas, in 1995, firms obtained 31 p.c. of their finance from other non-financial corporations and 23 p.c. from the rest of the world, in 2005, these two sectors gained in importance, together accounting for almost 80 p.c. of the financing requirements of non-financial corporations (or 39 p.c. each). The share of the other economic agents has therefore declined in relative terms. At the end of 2005, household assets held with non-financial corporations represented only 8.1 p.c. of total corporate liabilities (against 17.4 p.c. at the end of 1995), those of financial institutions came to 12.4 p.c. (against 26.3 p.c.) and those of general government 1.5 p.c. (against 2.4 p.c.).

Conclusion

In recent years, Belgian non-financial corporations have formed substantially more financial assets than their counterparts in the euro area. In 2005, the financial assets held by Belgian companies were – partly for that reason – almost double the financial assets, expressed in percentages of GDP, of non-financial corporations in the euro area.

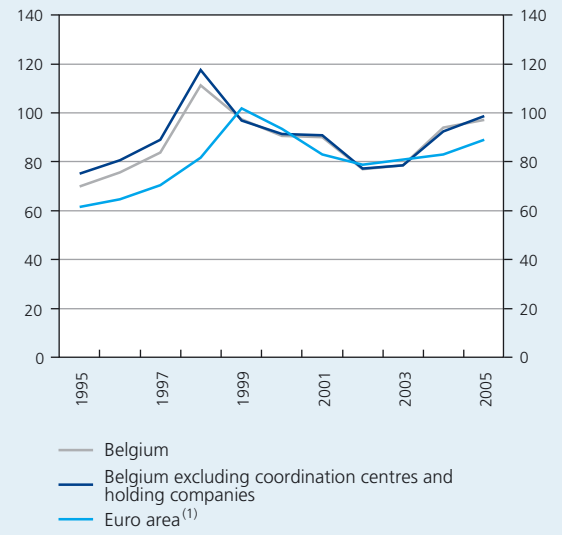
However, this situation certainly does not indicate any risk aversion on the part of Belgian non-financial corporations. In fact the liabilities side of their balance sheets also records growth of new financial liabilities in excess of the figure for non-financial corporations in the euro area, so that – in terms of liabilities, too – the outstanding total in Belgium is comparatively much higher than the outstanding total in the euro area.

This paradoxical situation of Belgian non-financial corporations – the fact that they hold much more substantial assets while at the same time contracting significantly greater liabilities – is due to the fact that the Belgian non-financial corporations sector includes coordination centres and non-financial holding companies, i.e. undertakings acting, as it were, as financial intermediaries. If the coordination centres and non-financial holding companies are excluded, the overall outstanding total gross assets and liabilities of Belgian non-financial corporations reverts to a level very close to the figure for the euro area.

Finally, in 2005, Belgian non-financial institutions recorded an outstanding total of net liabilities amounting to around 100 p.c. of GDP, i.e. slightly more than the outstanding total for non-financial corporations in the euro area. It is also apparent that the exclusion of the coordination centres and non-financial holding companies has hardly any effect on Belgium's net debtor position, confirming that these two types of institutions perform an intermediary function.

CHART 7 NET FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

(Outstanding totals, end of period, percentages of GDP)



Sources : Eurostat, NBB.
(1) Excluding Ireland and Luxembourg.

Although it is not possible to isolate the coordination centres and non-financial holding companies in the case of new transactions (flows), there is no reason to think that the effect would be any different: there would be a significant decline in the gross flows of new assets and liabilities, but that would have a negligible influence on the financial balance. That balance is very similar to the one for the euro area.

Bibliography

Baugnet V. and G. Wuyts (2006), "The role of equities in corporate finance in Belgium", *Economic Review of the National Bank of Belgium*, September, 35-47.

ECB (2006), "Why have listed non-financial corporations in the euro area increased their cash holdings over the last three years?", *ECB Monthly Bulletin*, September, 41-43.

ECB (2006), "Equity issuance in the Euro Area", *ECB Monthly Bulletin*, May, 89-99 (and more particularly the box on pages 93-96).

Ferreira M.A. and A.S. Vilela (2004), "Why Do Firms Hold Cash? Evidence from EMU-countries", *European Financial Management*, 295-319.

International Monetary Fund (2006), *World Economic Outlook*, April, 135-159.

Minne P. and S. Douénias (2004), *Planification fiscale internationale des sociétés belges*, Larcier, Brussels.

National Bank of Belgium (2006), *Financial stability review*.

Opler T., L. Pinkowitz, R. Stulz and R. Williamson (1999), "The Determinants and Implications of Corporate Cash Holdings", *Journal of Financial Economics*, April, 3-46.

Passov R. (2003), "How Much Cash Does Your Company need?", *Harvard Business Review*, November, 119-128.

Trend in the financial structure and results of firms in 2005

Frédéric Lagneaux
David Vivet (*)

Introduction

Every year, in the fourth quarter's Economic Review, the National Bank describes the developments taking place in the annual accounts of non-financial corporations (1). By the autumn, the Central Balance Sheet Office in fact already has a representative sample of the annual accounts relating to the previous year. The conclusions drawn on the basis of that sample can therefore be extrapolated relatively reliably to the population as a whole.

Historically, this article consisted essentially of a study of developments in the profit and loss accounts of firms. In recent years, that study has been gradually supplemented by a financial and microeconomic analysis, not only of the profit and loss accounts but also of the balance sheets and the annexes to the annual accounts. For the past two years, an appraisal of the financial risks incurred by firms has also been presented on the basis of the results of an internal business failure prediction model.

This article is in three sections. Section 1 briefly describes the methodology and sample used. Section 2 presents an extrapolation of the main profit and loss account items. Finally, section 3 assesses the financial situation of companies, particularly their level of profitability, solvency, liquidity and financial risk.

(*) The authors would like to thank their colleagues in the Micro-Economic Analysis service and Christine Muhl for their valuable assistance.

(1) It should be remembered that this analysis concerns the statutory annual accounts and not the consolidated accounts. The introduction of the IAS/IFRS standards has had no impact on the data presented in this article, since those standards are currently only compulsory in the case of consolidated accounts.

(2) It is also necessary to note that, every year, there are some firms which fail to submit annual accounts, despite the statutory obligation. The percentages given inevitably disregard those firms.

1. Methodology and constant sample

1.1 Characteristics of the data used and construction of the constant sample

Since the late 1970s, the Central Balance Sheet Office has collected data on the accounts of non-financial corporations each year. For that purpose, the firms are required to submit their annual accounts using a standard form by no later than seven months after the end of the financial year. The data are then adjusted as necessary to meet the required quality standards; after that, an initial analysis can be conducted from September onwards. However, each year the nature of the data available for the latest financial year examined – in the present case 2005 – raises two methodological questions.

First, the population of annual accounts relating to 2005 is incomplete. The reason for this situation is that many sets of annual accounts are filed late or do not pass the arithmetical and logical checks conducted by the Central Balance Sheet Office. Every year, the proportion of accounts not filed or not capable of inclusion in the analysis on 31 August exceeds 20 p.c. Since these problems mainly concern fairly small firms, these missing accounts represent less than 10 p.c. of the value added of all non-financial corporations: a small proportion but nonetheless significant (2).

Second, firms whose annual accounts are available late are in a structurally less favourable financial situation than the others. Previous editions of this article have highlighted the significant differences between firms

according to the time of filing their annual accounts: firms which filed their accounts late are significantly less liquid, less solvent and less profitable. In all probability, the data currently available for 2005 therefore present an over-optimistic view of reality.

Being subject to this double bias, the 2005 data are not directly comparable with those for previous years. In order to ensure comparability, the constant sample method is used. The constant sample for 2004-2005 comprises firms which filed annual accounts for both 2004 and 2005, and which meet the following conditions:

- both sets of annual accounts relate to a financial year lasting 12 months;
- both sets of annual accounts met the quality requirements of the Central Balance Sheet Office;
- the annual accounts relating to 2004 were filed before 31 August 2005;
- the annual accounts relating to 2005 were filed before 31 August 2006.

The method consists in extrapolating the 2005 results on the basis of the trends found in the constant sample: the 2005 figures are obtained by taking the final figures for 2004 and applying the rates of change recorded in the sample. It is therefore assumed that the trends seen in the sample are representative of the trends occurring in the population as a whole. As verified in previous editions of this article, the estimates may be considered satisfactory since, in the vast majority of cases, they give an accurate representation of the direction and scale of the actual movements.

1.2 Classification of firms by size and branch of activity

Non-financial corporations form a heterogeneous population within which very divergent trends may be recorded. The tendencies detected by analysis of the overall results therefore have to be refined by analysis according to the size and branch of activity of the firms. For one thing, the corporate financing method and, more generally, the corporate financial position varies according to whether the firm is large or small. Also, firms are subject to cyclical movements specific to each branch of activity, and these are generally reflected in the movement in the annual accounts.

The distinction in terms of size is based on the criteria set out by the Companies Code. According to it, the following are classed as large:

- firms employing over 100 people, as an annual average, or
- firms which exceed more than one of the following limits:
  - annual average number of employees: 50;
  - annual turnover excluding VAT: 7,300,000 euro;
  - balance sheet total: 3,650,000 euro[1].

Firms which do not exceed these criteria, i.e. SMEs, can draw up their annual accounts in an abbreviated format, unlike large firms which are obliged to use the full format. However, not all SMEs make use of the option available to them. As a result, the population of sets of annual accounts filed in accordance with the full format contains not only the annual accounts of large firms, but also those of a significant number of SMEs. Every year, almost half of the sets of full-format accounts relate to SMEs. The firms therefore cannot be classified strictly by size according to the type of format used. For that reason, since 2001 the distinction has no longer been based on the type of format used but is based on strict compliance with the Companies Code criteria. SMEs filing full-format accounts are thus no longer included in the population of large firms but are placed in the SME category[2].

The distinction according to the branch of activity is based on the NACE-BEL nomenclature of activities, used in most of the statistics offering a breakdown by branch in Belgium. The composition of the branches of activity considered is shown in Annex 1.

1.3 Representativeness of the constant sample

The constant sample for 2004-2005 is shown in table 1. It contains 149,818 firms, or almost 57 p.c. of the total number of sets of annual accounts filed in 2004. As in previous years, the level of representativeness measured in relation to the balance sheet total is considerably higher, since it exceeds 82 p.c. The reason is that the representativeness is traditionally greater for large firms than for SMEs. In the sample for 2004-2005, the cover rate for large firms is thus over 18 points higher in terms of the number of firms and the balance sheet total. Large firms in fact have a natural tendency to submit their annual accounts more promptly; in addition, they are the focus of special attention on the part of the Central Balance

(1) Details of these criteria may be found in Article 15 of the Companies Code. The criteria relating to turnover and balance sheet total underwent slight adjustment recently, following a European Directive: for turnover, the threshold was increased from 6,250,000 to 7,300,000 euro, and for the balance sheet total it was raised from 3,125,000 to 3,500,000 euro. These amounts were transposed into Belgian law by the Royal Decree of 25 May 2005 (Moniteur belge of 7 June 2005). The new thresholds apply to annual accounts closed on or after 31 December 2004. For the purposes of this article, in order to ensure intertemporal comparability, the historical data distinguishing between firms according to size have been revised by applying the new criteria to them. The scale of the modifications entailed in that revision is minimal.

(2) For more details on this reclassification, see the article published in the Economic Review for the 4th quarter of 2003.

TABLE 1 COMPOSITION AND REPRESENTATIVENESS OF THE CONSTANT SAMPLE FOR 2004-2005

	Firms in the 2004-2005 sample	All non-financial corporations in 2004	Representativeness of the sample, in p.c.
Number of firms	**149,818**	**264,666**	**56.6**
Large firms	6,117	8,171	74.9
SMEs	143,701	256,495	56.0
Manufacturing industry	13,832	22,897	60.4
Non-manufacturing branches	135,986	241,769	56.2
Balance sheet total (millions of euros)(1)	**784,833**	**952,928**	**82.4**
Large firms	667,035	777,749	85.8
SMEs	117,798	175,179	67.2
Manufacturing industry	220,466	226,719	97.2
Non-manufacturing branches	564,367	726,209	77.7

Source: NBB.
(1) For firms in the constant sample, the balance sheet total taken into account is the 2004 figure.

Sheet Office, which makes sure that it obtains a high level of representativeness as quickly as possible in terms of value added. Moreover, essentially owing to the predominance of large firms, manufacturing industry has a higher cover rate than non-manufacturing branches.

2. Movement in the main components of the profit and loss account

2.1 General trends and cyclical context

In 2005, the total value added created by non-financial corporations, i.e. the difference between sales revenues and the cost of goods and services supplied by third parties, totalled almost 145 billion euro (at current prices). Value added thus increased by almost 4 p.c. in 2005, i.e. at a slower rate than last year when growth attained 6.6 p.c. (table 2).

This trend, which is also evident in the national accounts, is occurring in the context of a less prosperous economic situation in 2005 than in 2004. Whereas, following three successive years of weak expansion in activity, 2004 brought a marked acceleration in GDP growth (at constant prices) to 3.0 p.c., growth declined to 1.1 p.c. in 2005. In reality, it was in late 2004 and the first half of 2005 that activity slowed, as a result of weakening demand both at home and abroad.

The growth of domestic expenditure dropped from 1.5 p.c. in 2004 to 0.9 p.c. in 2005, mainly as a result of the fall in both private consumption and corporate gross fixed capital formation. Foreign demand was affected both by the soaring commodity prices, particularly the price of petroleum products, and by the strong euro appreciation. From October 2005, when the euro exchange rate and oil prices became gradually less unfavourable and growth was restored in Europe, the Belgian economy recovered a degree of impetus, though it was insufficient to offset the slowdown of the preceding months.

The value added created by a firm enables it to cover its operating expenses, with any surplus recorded as a net operating profit. That profit measures the firm's current industrial and commercial efficiency, independently of its financing policy and any exceptional items. Staff costs traditionally account for the major part of the operating expenses: in 2005, for example, they represented almost 57 p.c. of the value added of non-financial corporations. In parallel with further employment growth, staff costs continued to rise in 2005 (+2.7 p.c.), a slightly less sustained pace than in the previous year (+3.4 p.c.). They were therefore outpaced by value added, as had already been the case in 2003 and 2004. After staff costs, depreciation is by far the most significant operating expense. In 2005, after shrinking for three successive years, depreciation allowances recorded a net increase. This was due to the trend in investment in tangible fixed assets, which in 2005 continued the revival which had begun in 2004.

TABLE 2 MAIN COMPONENTS OF THE PROFIT AND LOSS ACCOUNT

	Percentage changes compared to the previous year					Millions of euros	Percentages of value added
	2001	2002	2003	2004	2005 e	2005 e	2005 e
Value added	**2.1**	**1.4**	**4.4**	**6.6**	**3.9**	**144,987**	**100.0**
Staff costs (–)	3.9	3.2	1.6	3.4	2.7	82,121	56.6
Depreciation, downward value adjustments and provisions (–)	5.2	–2.3	–2.9	–1.8	2.5	24,534	16.9
Other operating expenses (–)	7.7	–2.1	9.3	9.7	5.5	8,611	5.9
Total operating expenses	*4.4*	*1.5*	*1.0*	*2.7*	*2.8*	*115,265*	*79.5*
Net operating result	**–10.6**	**0.7**	**25.5**	**26.5**	**8.4**	**29,722**	**20.5**
Financial income (+)	5.4	24.5	6.8	–12.4	12.2	49,192	33.9
Financial charges (–)	4.6	38.9	4.6	–15.9	8.8	41,153	28.4
Financial result	*9.4*	*–42.2*	*31.8*	*18.0*	*34.0*	*8,039*	*5.5*
Ordinary result	**–5.7**	**–11.3**	**26.7**	**24.9**	**13.0**	**37,761**	**26.0**
Exceptional result[1] (+)	–	–	–	–	–	10,985	7.6
Net result before tax	**–10.1**	**–26.9**	**77.0**	**2.3**	**45.8**	**48,746**	**33.6**
Taxes on profits (–)	–0.2	–5.0	7.0	11.5	8.8	7,992	5.5
Net result after tax	**–13.1**	**–34.5**	**112.1**	**–0.1**	**56.3**	**40,754**	**28.1**
p.m. Net result after tax excluding the exceptional result	*–7.7*	*–13.7*	*34.8*	*29.2*	*14.2*	*29,769*	*20.5*

Source: NBB.
(1) There is very little sense in calculating a percentage change for this aggregate, which may be either positive or negative and does not lend itself to reliable estimation.

Largely owing to the trend in staff costs and depreciation, total operating expenses increased by 2.8 p.c. in 2005. For the third consecutive year, the growth of value added thus exceeded the increase in operating expenses. This situation led to a further considerable rise in the net operating result (+8.4 p.c.), which had already produced an exceptional increase in 2003 and in 2004. In the space of three years, the operating result of non-financial corporations gained around 12 billion euro, a rise of almost 70 p.c., achieved mainly by the control of operating expenses in a generally favourable economic climate. This was the largest increase ever recorded since the Central Balance Sheet Office began collating the annual accounts; that is evidence of the current ability of firms to generate profits by pursuing their commercial activities.

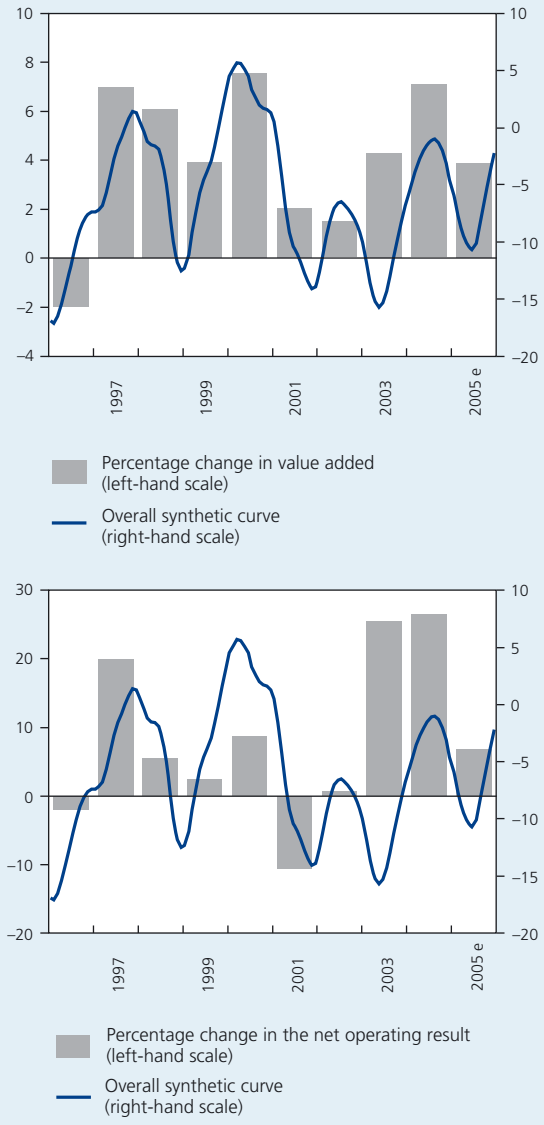
The trend in the value added and operating results of non-financial corporations can be compared with the movement in the Bank's business survey indicator, which measures business confidence (chart 1). These three variables generally follow a similar pattern. This proved to be the case once again in 2005, since the slowdown in the growth of value added and operating results corresponded to the low point reached by business confidence in mid 2005.

The financial result expanded strongly once again in 2005, to reach approximately 8 billion euro. As emphasised in previous editions of the Economic Review, the past decade has seen considerable growth in the financial result, the main factor being the rising proportion of corporate balance sheets represented by financial assets[1]. After recording a balance of practically zero in 2004, the exceptional result attained a record level of close to 11 billion euro in 2005, following various adjustments to the value of financial fixed assets[2]. Finally, the amount of tax paid by companies increased for the third consecutive year. Of course, this increase is linked to the rise in the operating result, which is by far the largest component of corporate taxable incomes.

(1) Financial assets means long-term investments and current assets bearing interest (including cash investments and liquid assets).
(2) These revisions occurred mainly in connection with asset disposals.

Once all the components of the profit and loss account were aggregated, non-financial corporations made a record net profit of almost 41 billion euro, over 50 p.c. more than in 2004. This further substantial rise was due to simultaneous increases in the operating, financial and exceptional results. Owing to the increasingly volatile impact of the exceptional result on final profits[1], it is also interesting to examine the behaviour of the net result excluding the exceptional result; this fluctuates less widely and is more representative of recurrent corporate performance. In 2005, that figure came to almost 30 billion euro, an increase of 14 p.c. against 2004. For the record, it has doubled since 2002.

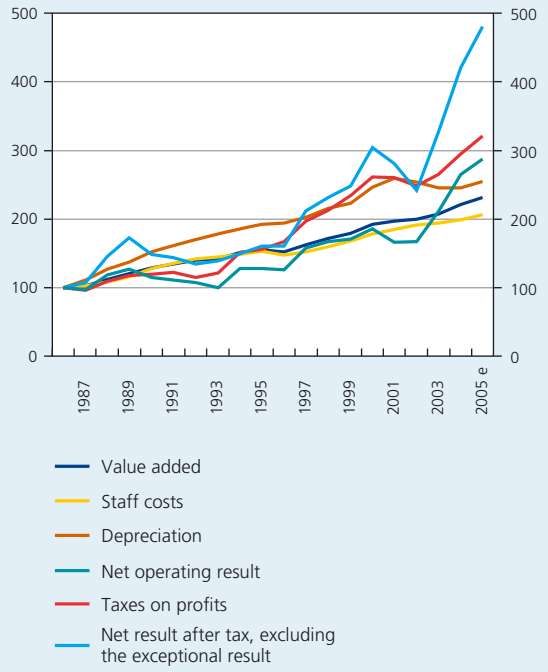
CHART 1 VALUE ADDED, NET OPERATING RESULT AND BUSINESS SURVEY INDICATOR



Source : NBB.

CHART 2 MOVEMENT IN THE MAIN COMPONENTS OF THE PROFIT AND LOSS ACCOUNT

(Indices 1986 = 100)



Source : NBB.

In a historical perspective, the scale of the increase in profits recorded since 2002 is exceptional. Chart 2, which shows the movement in the main components of the profit and loss account over the past twenty years, bears witness to that. It is from the mid 1990s onwards that the net result after tax (excluding the exceptional result) has begun to grow at a decidedly more sustained rate than the other profit and loss account components, particularly value added. In the end, the 2001 and 2002 profits correction was only a digression, since it was more than offset in a single year in 2003. The divergent trends in the net result after tax and the operating result are evidence of the growing share of corporate profits represented by the financial result.

(1) The share of the profit after tax represented by the exceptional result thus fell from 23 p.c. in 2003 to 0 p.c. in 2004, before climbing back to 27 p.c. in 2005. the exceptional result may make a negative contribution to the profits, and did so in 2002.

TABLE 3 VALUE ADDED AND NET OPERATING RESULT BY BRANCH OF ACTIVITY

(Percentage changes compared to the previous year)

	Value added		Net operating result		*p.m. Percentage share of the branches in total value added*
	2004	2005 e	2004	2005 e	*in 2005 e*
Manufacturing industry	**3.5**	**2.0**	**26.4**	**3.6**	***32.2***
of which:					
Agricultural and food industries	4.9	0.7	19.6	–3.9	*4.3*
Textiles, clothing and footwear	–2.6	–7.8	7.0	–29.7	*1.3*
Timber	–7.9	0.8	37.1	20.2	*0.6*
Paper, publishing and printing	3.8	–0.4	24.0	–5.3	*2.4*
Chemicals	2.3	6.0	14.6	5.9	*8.7*
Metallurgy and metalworking	16.5	0.3	121.9	4.4	*4.7*
Metal manufactures	6.0	3.0	3.5	26.2	*6.7*
Non-manufacturing branches	**8.2**	**4.9**	**26.5**	**10.8**	***67.8***
of which:					
Retail trade	6.5	4.3	28.6	6.2	*8.3*
Wholesale trade	8.1	6.5	42.7	14.9	*13.0*
Horeca	4.6	1.1	12.8	8.2	*1.6*
Transport	10.7	5.8	237.6 (1)	125.3 (1)	*7.8*
Post and telecommunications	7.7	3.2	48.3	1.1	*5.2*
Real estate activities	8.1	8.1	21.3	5.4	*3.2*
Business services	8.8	6.4	20.6	8.3	*12.7*
Energy and water (1)	12.7	–2.1	–9.7	–7.8	*3.9*
Construction	4.7	3.4	17.2	16.5	*6.1*

Source: NBB.

(1) The substantial variations in the operating results in the transport branch are due mainly to the practically zero (but positive) value of that aggregate in 2003.

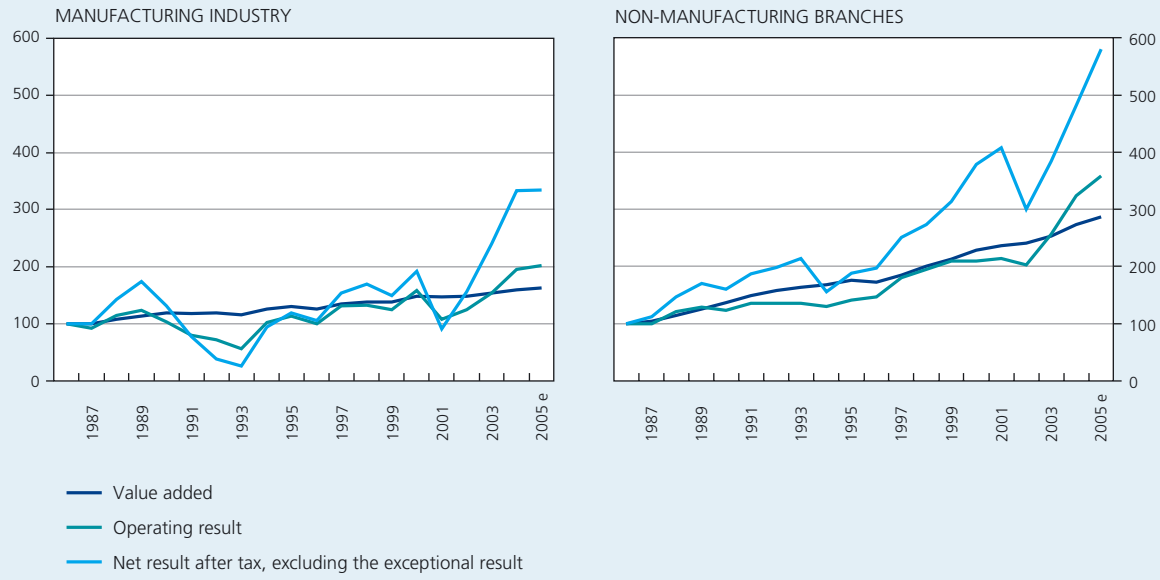
2.2 Results by branch of activity

In manufacturing industry, value added growth slowed in 2005, dropping to 2 p.c. (table 3). In the first part of 2005, Belgian industry was particularly affected by the deterioration in the international environment, owing to the importance of foreign markets and the high energy content of production. It was the metallurgy and metalworking branches, being among the most open sectors of the Belgian economy, that were the primary contributors to the slowdown in manufacturing activity. Conversely, the chemical industry was one of the few to see growth accelerating. In basic chemicals in particular, value added increased despite the downturn in production, as firms were able to pass on the higher commodity prices in their producer prices.

After increasing by 80 p.c. between 2001 and 2004, the operating result of industry continued to rise in 2005, but at a decidedly more moderate pace (+3.6 p.c.): while the growth of value added came to a halt, total operating expenses surged after three years of decline. The main reason was the substantial increase in intangible fixed assets on the balance sheet of certain pharmaceutical companies (1), which gave rise to large amounts of depreciation. In metallurgy, following the exceptional performance seen in 2004, the operating profit showed hardly any increase in 2005, owing to the weakening global demand for the products of that branch; however, it should be remembered that the metallurgy branch had produced a five-fold increase in its operating result in the preceding three years. Finally, despite the downgrading of growth, the metalworking branch experienced a surge in its operating profit in 2005, in contrast to the industry as a whole. That movement was due mainly to the reduction in staff costs, which itself reflects a decline in the number of workers employed in the branch.

(1) This mainly concerns capitalised research and development expenditure, but also patent costs.

CHART 3 MOVEMENT IN SOME COMPONENTS OF THE PROFIT AND LOSS ACCOUNT
(Indices 1986 = 100)



Source : NBB.

In the non-manufacturing branches, the expansion of activity also slackened pace significantly in 2005 (+4.9 p.c. against 8.2 p.c. in 2004). The main reason for this slowdown was the less buoyant domestic demand. In particular, while household consumption had made an active contribution to growth in 2004, it flagged somewhat in 2005, and the majority of the non-manufacturing branches suffered. The operating profit of the non-manufacturing branches continued to grow at a sustained rate in 2005 (+10.8 p.c.). Although this was slower than the 2004 growth rate, it must be stressed that the operating profit had grown by around 60 p.c. in the preceding two years. Overall, like their counterparts in industry, the service firms therefore did more than consolidate their operating profit at the record level achieved in 2004.

Chart 3 places these recent sectoral developments in a long-term perspective. It depicts the variations in value added, operating result and net result after tax (excluding the exceptional result) over the past twenty years, presenting them separately for the manufacturing and non-manufacturing branches. The fact that value added is growing much faster in the latter than in the former is evidence of two strong fundamental trends, namely de-industrialisation and globalisation[1]. As regards the ability of firms to generate profits, it is notable that in 2002 the operating result and net profit in industry had both fallen back to their 1986 levels. To put it mildly, this finding reveals the structural problems experienced by industry over the past twenty years. Non-manufacturing firms saw a six-fold increase in their profits over twenty years, attributable both to their commercial performance (reflected in the operating result) and to their financial results, whose growing impact on profits has already been mentioned.

2.3 Profit margins

An additional indicator can shed light on the analysis of the results of non-financial corporations, namely the movement in the profit margin, a ratio involving the turnover variable[2].

The gross profit margin represents the profit (or loss) on commercial or industrial activity excluding unpaid expenses. It is therefore equal to the ratio between the sum of the operating result, depreciation and downward valuations on stocks and provisions for liabilities and charges, on the one hand, and the turnover plus other operating income less operating subsidies on the other.

(1) The impact of these two phenomena in Belgium was analysed recently by Dresse L. and B. Robert (2005), "Industry in Belgium : past developments and challenges for the future", Economic Review III-2005, National Bank of Belgium, Brussels.

(2) Since mentioning the "turnover" (item 70) is optional in accounts filed in the abbreviated format, only 27 p.c. of SMEs are taken into account in this section, on average, over the period 2003-2005.

TABLE 4 PROFIT MARGINS (GLOBALISATION[1])

(Percentages)

	Large firms			SMEs		
	2003	2004	2005 e	2003	2004	2005 e
Manufacturing industry						
Gross margin	9.7	9.3	9.0	8.1	8.3	8.3
Net margin	4.4	5.2	5.0	2.8	2.9	3.3
Non-manufacturing branches						
Gross margin	6.4	7.1	6.8	8.0	8.5	8.7
Net margin	3.5	4.2	4.1	3.4	4.0	4.3
All branches together						
Gross margin	7.5	7.9	7.5	8.0	8.5	8.6
Net margin	3.8	4.5	4.4	3.3	3.8	4.2

Source : NBB.
(1) For clarification, see section 3.

The net profit margin concerns the firm's performance after depreciation, downward valuations on stocks and provisions for liabilities and charges. It divides the sum of the operating result and capital subsidies by the same denominator as the gross margin.

As shown by table 4, gross and net margins were eroded slightly in 2005 in the case of large firms, while the opposite happened for SMEs, thus confirming their good performance in 2004.

In large firms, the decline in the gross margin concerned the timber industry (manufacturing) and the energy and water supply sector (non-manufacturing), which were directly affected by the rise in commodity prices, and also real estate activities. Conversely, this margin increased slightly in the chemical industry, which saw significant export growth, in metalworking, an industry which withstood the rise in commodity prices thanks to the recovery in the second half of 2005, and also in the post and telecommunications sector. The gross margin increased in SMEs manufacturing textiles, timber products, and chemicals, and in non-manufacturing SMEs in the hotel & restaurant sector, while reductions were recorded in the paper industry, the post and telecommunications sector and the energy and water supply sector.

Except in a few cases, the net margin followed the same pattern as the gross margin in the same branches. Among the large firms, it nevertheless increased in the timber and real estate industry which, in contrast to the decline in their gross margin, indicates a substantial reduction in depreciation and downward value adjustments in those branches. The relative increase in the net margin in SMEs follows the positive movements recorded in the majority of manufacturing branches, but with the exception of the paper industry, and in the wholesale trade, the hotel & restaurant branch and real estate. Altogether, the branches produced positive net margins except for SMEs in the energy & water sector, transport, and post and telecommunications, branches affected respectively by the surge in commodity prices and competition from large groups. If a firm faces a negative net margin for an extended period, it can no longer cover the remuneration on the equity capital and borrowings. That applies to around 9 p.c. of SMEs, and 18 p.c. of large firms.

3. Financial situation of firms

The analysis of the financial ratios which follows is based on the theory of interpretation of the annual accounts. The ratios are presented both in global form and as a median. The globalised ratios are obtained by taking the sum of the numerators for all firms considered and dividing it by the sum of their denominators. The second ratio, the median, is the central value in an ordered distribution : for a given ratio, 50 p.c. of firms have a ratio above the median and 50 p.c. of firms have a lower ratio. The two measures are complementary as they reflect different realities. Since it takes account of each firm according to its real weight in the numerator and the denominator,

the globalised ratio primarily reflects the situation of the largest firms. In contrast, by indicating the situation of the central firm, the median reflects the movement in the population in general, as the median is influenced equally by each of the firms examined, regardless of size.

3.1 Profitability

3.1.1 Return on equity after tax

Profitability is defined as the firms' ability to generate profits. It can be assessed, in particular, on the basis of the net return on a firm's own capital. This ratio expresses the net profit after tax as a percentage of the equity capital, and corresponds to the return on equity (ROE). It indicates the return which shareholders can expect after deduction of all expenses and taxes. The risk premium, i.e. the financial compensation for the risk incurred by shareholders over a given period, is measured as the difference between the return on equity and the return on a risk-free investment. The latter is calculated on the basis of the benchmark loan or ten-year linear bonds (OLOs), and is shown in chart 4.

In 2005, the globalised return on equity came to 10.1 p.c. for large firms and 8.4 p.c. for SMEs (chart 4), an upward trend being recorded in both cases. The main factors behind these increases are the jump in the financial and exceptional results of a number of large non-financial corporations, particularly in chemicals, metalworking and wholesale trade. The operating result was also up, though to a lesser extent (see above).

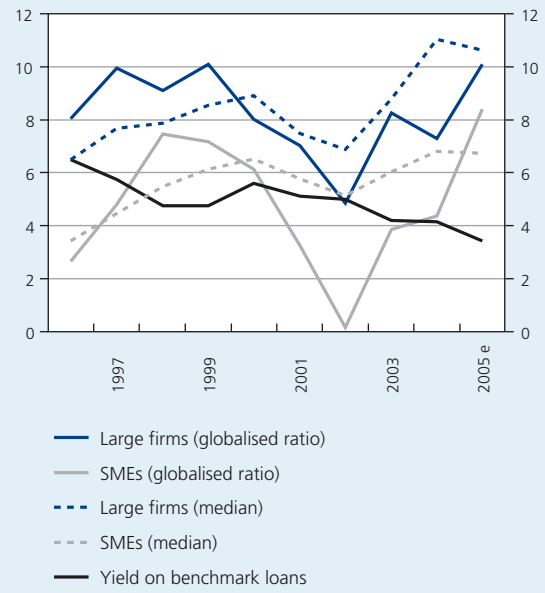
Chart 5 depicts the globalised profitability of large firms and SMEs, with and without the exceptional result[1]. The latter exerts a considerable influence on the return on equity after tax. The globalised profitability of large firms can be compared to the yield on government bonds. Following the falls in 2002 and 2004, the profitability of the biggest companies climbed back in 2005 to a level more than twice the benchmark bond yield, thus offering their shareholders a substantial risk premium. In 2005, equity investments therefore proved more attractive, in comparative terms, than they had in the preceding years[2]. The globalised profitability of SMEs was also well above this benchmark level.

Chart 5 reveals the impact of the exceptional result on the profit ratio. In the large firms the high exceptional result of 1999 (left-hand chart) occurred mostly in wholesale firms connected with petrochemicals. The subsequent peaks were due to exceptional income in energy and telecommunications, in 2003, and in petrochemicals and the wholesale trade in 2005. The exceptional result accounted for more than half of the globalised profit ratio in SMEs (right-hand chart) from 1998 to 2000, years dominated by exceptional revenues in business services. In 2002, substantial exceptional expenses were recorded in telecommunications and business services, thus accounting for this reversal of the situation. In 2005, large exceptional revenues were recorded by SMEs in energy and business services.

The median profitability, less sensitive to isolated variations, and therefore to the impact of the financial or exceptional results, was down slightly to 10.6 and 6.7 p.c. respectively for large firms and SMEs. Table 5 shows these movements for the main branches of activity. It should be remembered that the median highlights the changes recorded in the population as a whole. In 2004, this median ratio had peaked in non-financial corporations in general. In 2005, a slight dip was recorded in large firms in both the manufacturing and non-manufacturing sectors. However, in metalworking, the retail trade, hotels & restaurants, post and telecommunications, real estate activities and

CHART 4 RETURN ON EQUITY AND YIELD ON BENCHMARK LOANS

(Percentages)



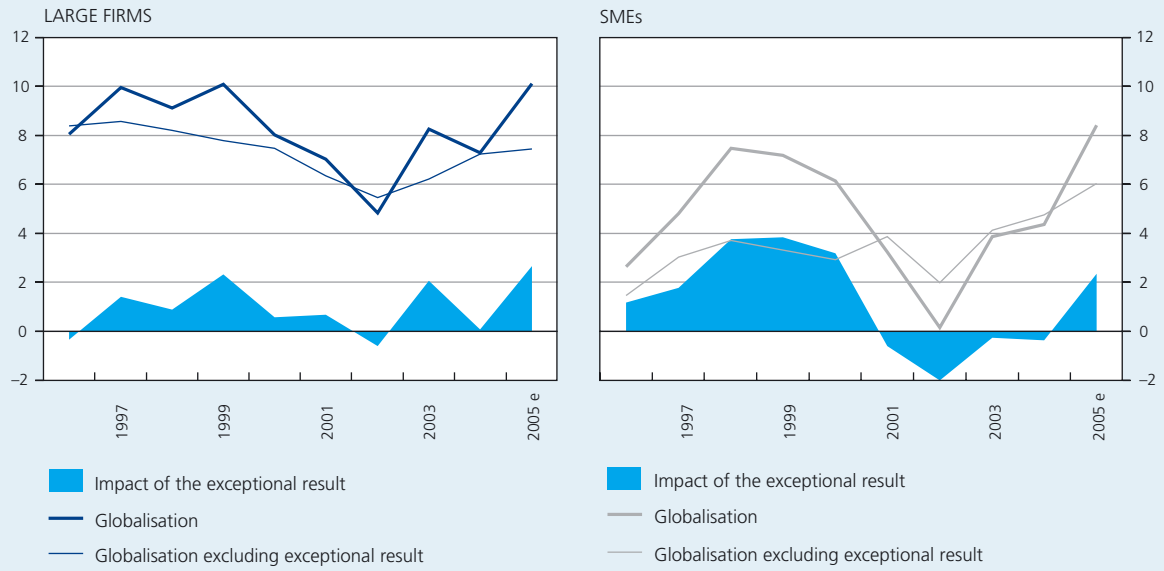
Source : NBB.

(1) The exceptional result in 2005 is the sum of the exceptional results of firms filing their annual accounts with a closing date of 31 August 2006 and not the extrapolation of the figures obtained from the constant sample.

(2) This comparison disregards two practical points : equities and government bonds are two different financial instruments, and many large firms are not listed on the stock market. It must therefore be treated with caution.

CHART 5 RETURN ON EQUITY AFTER TAX AND INFLUENCE OF THE EXCEPTIONAL RESULT

(Percentages)



Source : NBB.

construction, the trend in profitability was more favourable. In SMEs the picture is more mixed ; large increases were recorded in certain manufacturing branches, such as metallurgy and metalworking, tempered by falls in the non-manufacturing branches of transport and energy & water. The return on equity after tax also remains negative in more than a quarter of SMEs.

3.1.2 Leverage effect

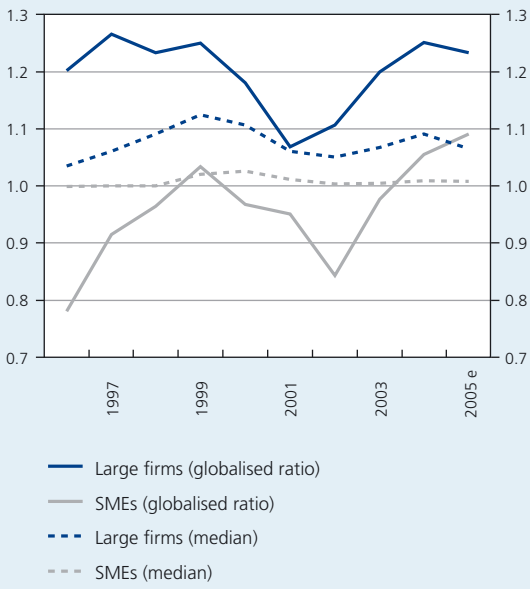
The return on equity after tax offers an indication of a firm's profitability. Another indicator supplements the analysis of profitability : the leverage. This is the ratio between the return on equity and the return on capital raised [1], both being calculated before tax and exceptional results. Leverage is defined by the following ratio :

$$\frac{\text{current result / equity capital}}{\text{(current result + cost of debt) / capital raised}}$$

By thus comparing a firm's financial return with its economic return, this multiplier indicates the positive effect – if it is greater than 1 – or the negative effect – if it is less than 1 – which borrowings exert on the return on equity. If the economic return exceeds the average cost of borrowings, that produces a positive leverage effect

(1) Capital raised means equity capital and financial liabilities, i.e. funds provided by third parties who are remunerated by the income generated by the assets which they have financed. This concept is preferred to the concept of total assets for assessing a firm's economic return in the context of leverage. The method of calculation is presented in the annex. For more information, visit the Central Balance Sheet Office website : www.nbb.be.

CHART 6 LEVERAGE EFFECT



Source : NBB.

TABLE 5 RETURN ON EQUITY AFTER TAX BY BRANCH OF ACTIVITY (MEDIAN)

(Percentages)

	Large firms			SMEs		
	2003	2004	2005 e	2003	2004	2005 e
Manufacturing industry	**7.3**	**10.0**	**9.2**	**5.3**	**6.7**	**6.8**
of which:						
Agricultural and food industries	7.8	10.7	9.9	6.1	7.5	8.0
Textiles, clothing and footwear	4.2	6.4	5.2	2.8	3.3	3.7
Timber	3.5	9.9	9.4	4.0	5.7	4.9
Paper, publishing and printing	9.7	12.0	8.1	5.4	6.8	5.7
Chemicals	9.3	9.6	8.8	5.5	6.5	6.0
Metallurgy and metalworking	7.7	13.0	11.9	6.7	7.9	8.6
Metal manufactures	5.8	10.7	12.1	6.2	7.9	8.4
Non-manufacturing branches	**9.5**	**11.6**	**11.5**	**6.1**	**6.8**	**6.7**
of which:						
Retail trade	10.0	12.5	12.5	6.8	7.8	7.2
Wholesale trade	10.9	13.3	13.3	6.3	6.9	6.6
Horeca	5.3	6.9	7.2	4.3	4.0	4.6
Transport	8.8	10.9	10.4	7.5	7.6	6.5
Post and telecommunications	7.7	9.5	10.0	8.8	8.0	8.4
Real estate activities	5.0	6.0	6.5	1.4	1.6	2.1
Business services	6.3	9.5	8.4	9.1	10.4	10.1
Energy and water	9.8	6.9	6.1	3.9	8.4	3.4
Construction	8.3	9.6	12.2	8.0	9.1	8.7

Source: NBB.

enabling the firm to make a higher return on equity than the return on all its assets. The leverage effect therefore depends on the relative size of the financial debts, which are encouraged if the leverage effect is positive and discouraged if it is not.

The structural difference in the return between large firms and SMEs (see above) is reflected in the leverage effect which is mainly high in the case of large firms. Although the median is close to 1 in both cases, while favouring large firms, the globalised ratio takes better account of the movement in the results of the main non-financial corporations (chart 6). Although it is still clearly positive, the globalised leverage effect declined slightly in large firms in 2005. That applies, for instance, to the timber and chemical industries. This decline was tempered by favourable movements in some non-manufacturing branches, such as energy & water, hotels & restaurants, and transport, and the restoration of a positive leverage effect in real estate. It continued the rise which had begun in 2003 in SMEs, where it was positive for the second consecutive year as a result of the positive difference between a high financial return on equity and historically low interest rates. Attention should be drawn here to the increase in the ratio in the majority of manufacturing branches in 2005, including chemicals and metalworking, the leverage effect reverting to positive in this last branch.

In recent years, the leading non-financial corporations therefore presented a particularly favourable picture in terms of their financial debt burden, from an accounting point of view. The debt level remained stable over the period, and actually declined somewhat in 2005, falling below 29 p.c. of the total liabilities in non-financial corporations as a whole. That decline is due partly to the lower leverage in large firms, recorded in the same year. The same applies to total debts[1], which levelled out at 55 p.c. of the total liabilities of large firms and 65 p.c. of the total for SMEs. This is connected partly with the economic uncertainty in the last year or two, which has delayed substantial investments, and partly with the increasing

(1) Sum of short-term and long-term debts.

return on equity mentioned earlier, making this method of financing highly attractive to shareholders, sometimes to the detriment of borrowings. Another factor, relating to corporate taxation, also played a part. It is analysed in detail in the next section.

3.2 Solvency

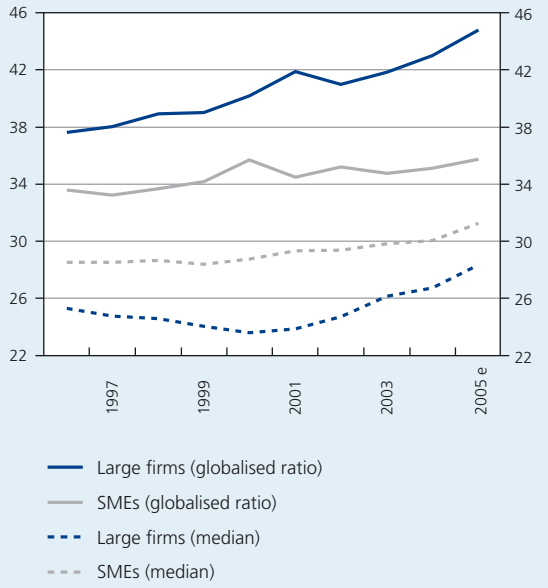
Solvency corresponds to the ability of firms to honour all their short-term and long-term financial commitments. It is analysed on the basis of three concepts: the degree of financial independence, the degree to which borrowings are covered by the cash flow, and the interest charges on financial liabilities.

The degree of financial independence is equal to the ratio between equity capital and total liabilities. If the ratio is high, the firm is independent of borrowings. This has two beneficial effects: first, financial expenses are low and therefore exert little downward pressure on profits; also, the firm has more scope for contracting new debts on favourable terms. Analysed in these terms, solvency can also be interpreted as a measure of the firm's financial risk, since the remuneration of third parties is fixed, unlike the firm's results. In 2005, globalised financial independence stood at 44.8 p.c. in large firms and 35.7 p.c. in SMEs, an increase against the previous year. The difference between these two values is structural, and has actually tended to widen since 2003 (chart 7), owing to the increase in the proportion of equity capital in the largest firms. Companies as a whole have seen their financial independence increase since 2001, as is evident from the two median ratio curves. There was therefore an increase in the percentage of total liabilities represented by the equity over this period, and especially in 2005, the year in which a new corporation tax system was introduced, concerning the notional interest deduction (see box 1). The median for SMEs is higher than for large firms. The order is therefore the reverse of that for the globalised curves, the main reason being the existence of a large number of SMEs making little use of borrowings[1]. But around these central values, the ratio distribution is such that almost 16 p.c. of the firms considered present negative financial independence, as a result of losses carried forward in excess of the sum of the subscribed capital and reserves. That observation tempers the positive picture presented above.

(1) This need not mean that the proportion of SMEs with a high debt ratio is lower than for large firms.

CHART 7 DEGREE OF FINANCIAL INDEPENDENCE

(Percentages)



Source: NBB.

Box 1

The equilibrium thus achieved in the balance sheet figures forms the basis of the reasoning behind the design of the new scheme concerning the "notional interest" deduction. Synonymous with a risk capital allowance, this device offers an incentive to take risks for firms which are subject to Belgian corporation tax. Before the scheme's introduction by the legislature in June 2005 in the income tax code, it was normally only borrowed capital that gave rise to an allowance for interest charges, while the remuneration of the capital provided by shareholders was included in the corporate tax base. The introduction of a risk capital allowance reduces the difference between the cost of capital according to source. The tax base can thus be reduced by a notional amount of interest on ▶

the equity, calculated at the reference rate on 10-year bonds. These new provisions will take effect from the 2007 fiscal year, the equity capital as at 31 December 2005 being taken, in principle, as the basis for calculating the first allowance[1]. At the same time, share issue rights (0.5 p.c.) were abolished at the beginning of 2006. The government expects that this device for reducing the corporate tax burden will boost capital investment in Belgium and augment the tax efficiency of inter-group financing, while providing an alternative to the coordination centre arrangements which are being terminated. It should also result in a relative reduction in the debt levels of companies taxed in Belgium, as already mentioned in section 3.1.2; that is apparently borne out by the movement in the financial independence ratio in 2005 (see above). However, the scheme does not allow for any differentiation according to the use to which the capital is allocated.

(1) 31 December 2005 was taken as the date for all firms with a financial year corresponding to the calendar year. Calculated *pro rata temporis* for any increase in the equity capital recorded from 1 January 2006 onwards. For details, see the Financial Stability Review 2006 and www.fiscus.fgov.be.

There are two other elements which complete the solvency analysis: the ability of firms to repay their debts, and the cost of those debts. These are concepts relating to the possible consequences of corporate financial dependence.

As a measure of the percentage of its debts that the firm could repay by allocating the whole of the year's cash flow to that purpose[1], the degree to which borrowings are covered by cash flow indicates the firm's repayment capability. The converse of that ratio indicates the number of years which it would take to repay all the debts at a constant cash flow. A low level of financial independence associated with a high level of indebtedness may very well be mitigated by a substantial repayment capability indicated by this ratio, and vice versa.

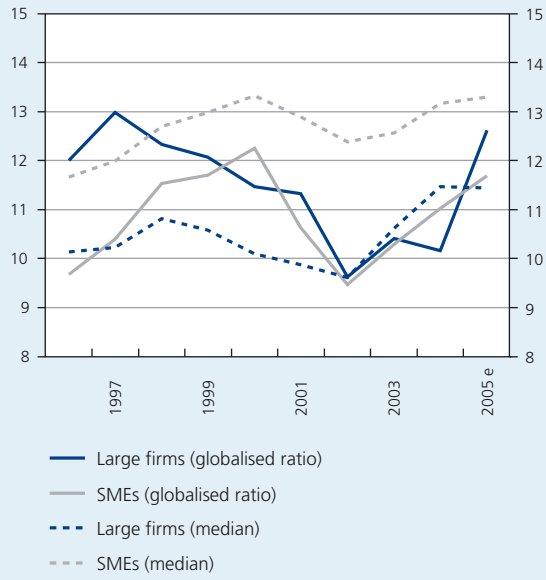
In 2005, the globalised cover rate of borrowings increased in both large firms and SMEs (chart 8). Following a decline in 2004, this ratio made a significant recovery the next year in large firms to reach 12.6 p.c., a level close to that achieved in 1997. The stagnation of debts combined with a substantial increase in the leading companies' cash flow – sometimes including large exceptional results – explains a phenomenon seen mainly in the manufacturing branches of chemicals and metalworking, but also in the non-manufacturing branches of transport and post and telecommunications. The globalised ratio also improved in SMEs, rising to 11.7 p.c. Together, these increases plus growing financial independence contribute towards a real increase in the solvency of non-financial corporations.

(1) This means the net flow of cash generated by the firm, equal to the difference between incoming revenue and outgoing expenditure.

As regards the population as a whole, the median ratio for large firms, which had peaked in 2004, remained stable in the following year at 11.4 p.c. In contrast, in SMEs it attained a record for the period at 13.3 p.c. These levels are significantly different from the globalised values, underlining the potential influence of a small number of companies on the numerators and denominators in the calculation of the global figure.

CHART 8 DEGREE TO WHICH BORROWINGS ARE COVERED BY CASH FLOW

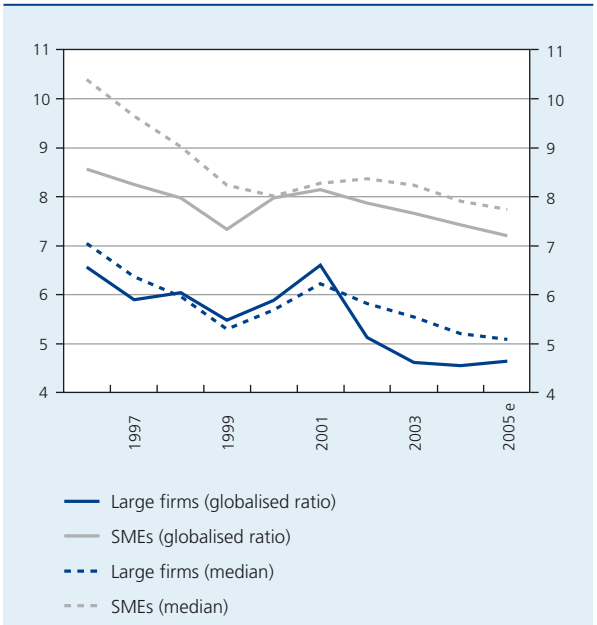
(Percentages)



Source: NBB.

CHART 9 AVERAGE INTEREST CHARGES ON FINANCIAL DEBTS

(Percentages)



Source : NBB.

The cost of borrowing is assessed as the average interest charges on financial debts. In 2005 these charges, in globalised terms, came to 4.6 p.c. in the case of large firms and 7.2 p.c. for SMEs, levels comparable to those recorded in the previous year (chart 9), the main reason being that market interest rates remained at a historically low level. Combined with a financial debt level remaining stable over time (see above), the lower interest rates led to a decline in charges from 2002 onwards, regardless of the size of the firms. Structurally, this ratio is lower in large firms than in SMEs. The reason is that lenders consider the financial profile of SMEs as a whole to be less sound than that of large firms for the same method of financing, hence the supplementary risk premium applied to SMEs[1]. Although the difference between the financial charges of these two categories of firms has varied over time, it does seem to have diminished since 2003, the year in which it reached a peak. The median values also indicate a decline in interest charges.

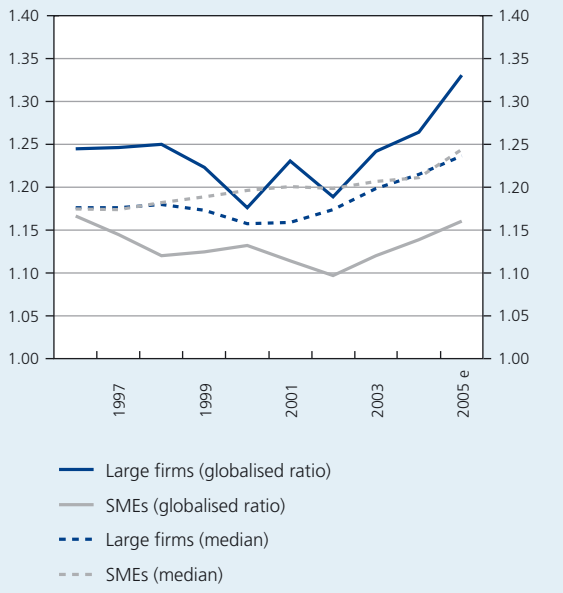
(1) SMEs also make more use of cash loans, a more expensive form of credit.

3.3 Liquidity

Liquidity indicates the capacity of firms to mobilise the cash resources needed to meet their short-term commitments, i.e. to repay debts falling due during the year. The liquidity ratio in the broad sense is commonly used for that analysis. This representation of the net working capital in the form of a ratio compares the total assets realisable and available (stocks, claims at up to one year, cash investments, liquid resources and accruals and deferrals) with the short-term liabilities (debts at up to one year and accruals and deferrals). The higher the liquidity in the broad sense, the more capable the firm of meeting its short-term financial commitments. If the ratio is higher than 1, the net working capital is positive.

In 2005, the globalised ratio was 1.33 for large firms and 1.16 for SMEs, having risen steadily since 2003 (chart 10). Firms achieved a financial balance which, overall, was better than in recent years, improving their ability to meet their short-term debt repayments. Among large firms the situation showed a marked improvement in chemicals, metalworking, energy and water, construction, post and telecommunications, real estate and business services. In the case of SMEs, large increases were recorded in metalworking, energy and water, and business services. Median liquidity also continued to rise in 2005, as the curves for large firms and SMEs converged. It should be remembered that the globalisation accords more weight

CHART 10 LIQUIDITY IN THE BROAD SENSE



Source : NBB.

to large firms and is therefore only a partial reflection of reality, while the median disregards the size disparities between players. The good performance shown in chart 10 therefore conceals the fact that over 38 p.c. of firms have negative net working capital. Furthermore, the liquidity ratio in the broad sense takes no account of a key dimension of business cash flow management, a defect which the next chart attempts to rectify.

The picture presented by liquidity may in fact vary considerably according to the ratio used for its analysis. Thus, the ratio of net cash flow to total assets, shown in chart 11, plainly shows that the largest firms have negative net cash flow, while their liquidity in the broad sense is high.

The net cash flow is calculated as the difference between active cash flow (cash investments and liquid assets) and the passive cash flow (short-term financial liabilities). In large firms, the globalised ratio indicates that the former tends to be exceeded by the latter, since this ratio is negative here, despite a relative increase since 2003. That situation implies that the net working capital falls short of the need for working capital, a dimension which is specifically disregarded by the preceding ratio. The requirements associated with the firm's operating cycle are therefore no longer covered simply by its net working capital. The largest variations, both up and down, during the period were recorded in large firms in the non-manufacturing sector providing business services – coordination centres [1] and financial services – and in the manufacturing sector in chemicals and petrochemicals. The cash flow of large non-manufacturing firms was close to equilibrium in 2005, whereas it continued to decline in manufacturing industries in the paper and metallurgy branches, further widening the gap between the two categories of firms. The higher net cash flow recorded by SMEs in the same year is due to the increases in metalworking and energy & water, tempered partly by the falls in chemicals and post and telecommunications.

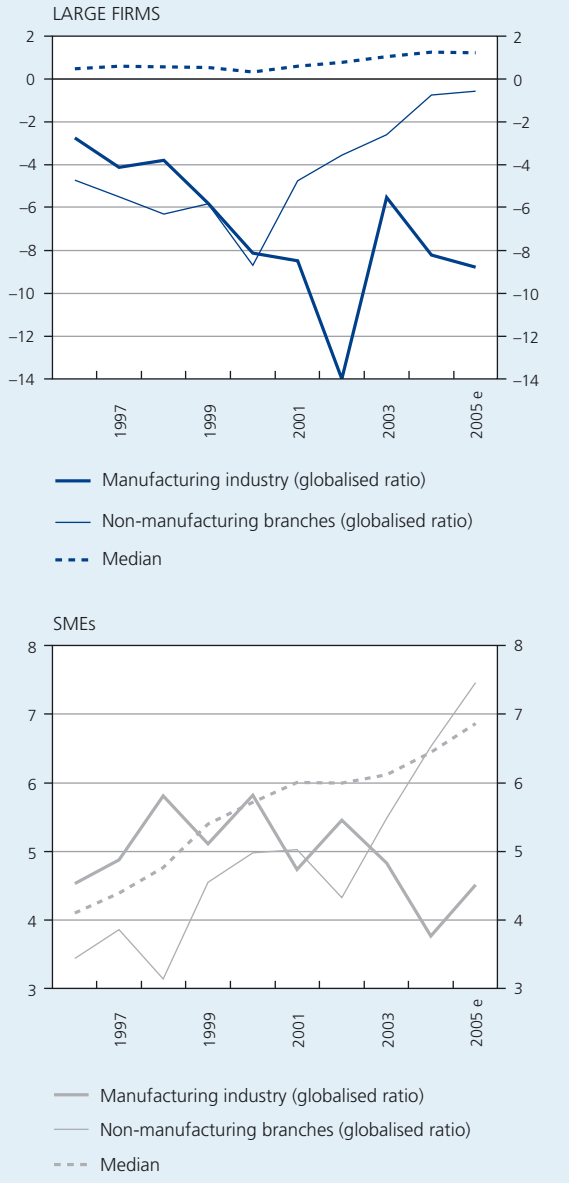
The median values are positive whatever the company size, but are 5 points higher in SMEs. The difference between the net cash flow of large firms and SMEs is due to the fact that, in collecting their financial debts, large firms have substantial room for manoeuvre accorded by their claims and stocks. In addition, they are granted a median period of supplier credit greater than that of SMEs. From a more theoretical point of view, the companies with a negative net cash flow have to act rapidly to rectify that imbalance by optimising their cash management, which amounts to improving their net working capital.

(1) The large negative cash flow of the coordination centres is inherent to their definition and functions.

The situation of firms with an adverse cash flow can be ascertained from an examination of overdue debts to the tax authority and the NSSO, mentioned in the annex to the annual accounts. Although the number of firms concerned here has fallen, the amounts involved have continued to rise, both in large firms and in SMEs. However, this finding can be qualified by considering the movement in the ratio between these amounts and the total assets of only those firms concerned (chart 12), though it must be

CHART 11 NET CASH FLOW IN RELATION TO TOTAL ASSETS

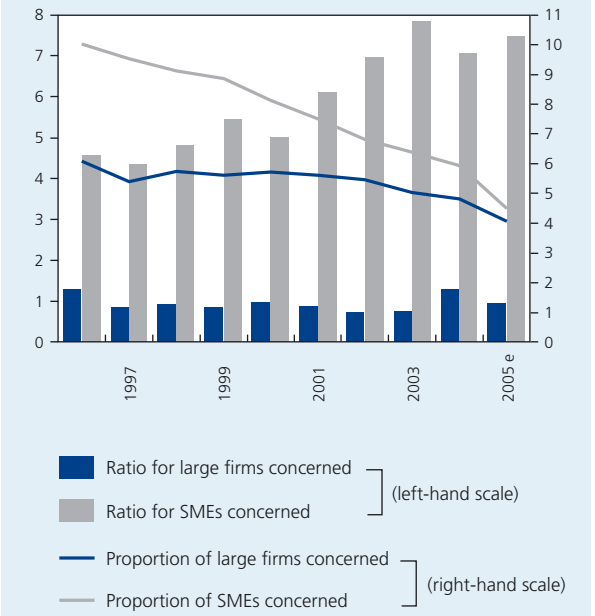
(Percentages)



Source : BNB.

CHART 12 OVERDUE DEBTS TO THE TAX AUTHORITY AND THE NSSO IN RELATION TO TOTAL ASSETS (GLOBALISATION)

(Percentages)



Source : NBB.

stressed that this ratio is structurally higher in SMEs than in large firms. The left-hand scale presents, according to size, the percentage attained by that globalised ratio in firms with overdue debts to the tax authority and the NSSO. The right-hand scale indicates the proportion which these firms represent of the population considered.

Almost all the firms with overdue debts to the tax authority and the NSSO, namely 97 p.c., are SMEs. But in 2005, this percentage was only slightly higher than the percentage of SMEs in the total population. The proportion of large firms and SMEs in that situation in fact converged in that year, being 4.1 p.c. for the former and 4.5 p.c. for the latter. The improvements already mentioned concerning the financial situation of SMEs appear to be confirmed here. But while the ratio of overdue debts to total assets dropped below 1 p.c. in large firms, it began rising again in SMEs in 2005, at 7.5 p.c., following a year of decline. The first branches to be affected by this rise were chemicals and textiles. The decline in large firms occurred mainly in the non-manufacturing branches, such as wholesale trade and business services.

(1) In the previous article the median value of the investment ratio was calculated by taking all firms into account. In this article, the median value is calculated solely on the basis of firms which effected investments (namely acquisitions of tangible fixed assets not equal to zero). As a result, the median ratios are below the 2004 levels.

3.4 Investment

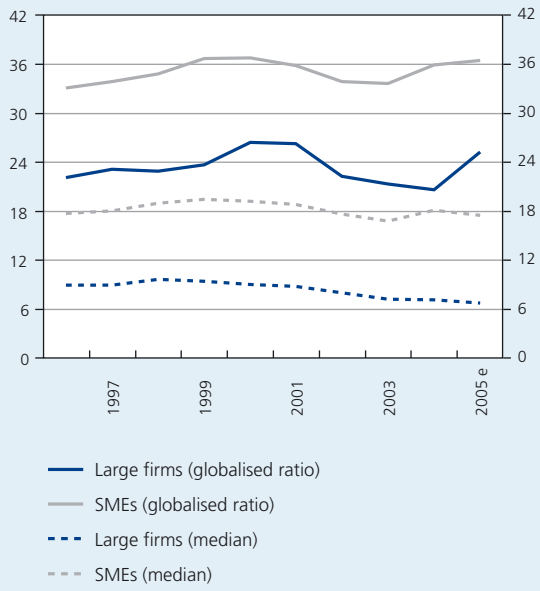
The amount which firms devote to investment can be assessed by the rate of investment, which is the ratio between acquisitions of tangible fixed assets and the value added for the year. A high ratio indicates that firms have invested substantially during the year under review.

The year 2005 brought a revival in total investment following a marked decline in the preceding years. This seems to reflect an effort to catch up, following a period in which investments were postponed pending more favourable economic conditions. The investment growth was more marked in large firms (chart 13 globalised ratio), where the rate increased by almost 5 points in a single year to 25.3 p.c. in 2005. It rose to 36.5 p.c. in SMEs in the same year, following a more modest increase (0.6 point). Despite this difference and the apparent dominance of large firms, the ratio of acquisitions of tangible fixed assets to value added remained higher in SMEs. Their lead is due to the fact that their value added is structurally lower than that of large firms as a percentage of the sums invested.

In contrast to the global figures, the median indicates a slight fall in the investment rate in both large firms and SMEs in 2005 (1). That finding tends to show that the major part of the relative growth of investment is

CHART 13 INVESTMENT RATE

(Percentages)



Source : NBB.

attributable to only a small number of large firms, and does not reflect what is happening in non-financial corporations as a whole.

For 53 p.c. of all firms, the investment ratio did not exceed 20 p.c. Moreover, 16 p.c. of them recorded a ratio in excess of 100 p.c.

The sectoral analysis shows that this strong rise in the globalised ratio for large firms is due essentially to the non-manufacturing branches (chart 14), and more particularly to construction and transport. This almost exclusively concerns the BNRC group, split into three companies since January 2005 (BNRC, Infrabel and NNRC Holding), which developed a substantial investment plan for 2005-2007. The marine transport branch also saw heavy investment in 2005, such as the renovation and enlargement of the fleet of vessels. In the case of SMEs, the majority of the branches recorded a relatively stable investment ratio, both as a median and in globalised form.

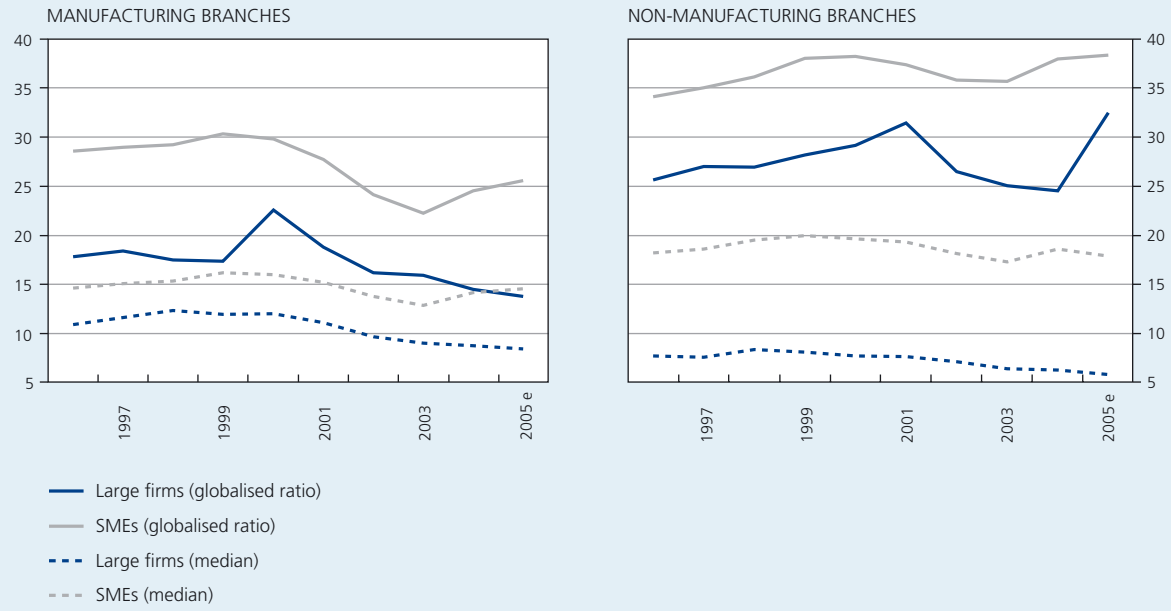
In manufacturing industry, large firms saw their investment shrink, especially in the metallurgy and metalworking branches, petrochemicals and textiles. The decline in investment in the textile branch is in line with the cuts in the production volume (relocation of production to low-wage countries, except for logistics). In the case of SMEs, the branches which invested most heavily in relative terms are metallurgy and metalworking, oil refining and the paper industry. The median figures follow a similar pattern to the globalised figures.

Chart 15 reveals the link between the investment rate and the capacity utilisation rate in manufacturing firms. For 2005, the decline in investment was accompanied by a fall in the average capacity utilisation rate. The investment rate, falling by half a point over the year to 15.2 p.c., reached in 2005 its lowest level for the past ten years. These findings are in line with a downward trend in investment in manufacturing industry.

Up to now, it is only the ratio between acquisitions of tangible fixed assets and value added that has been reported. However, the annex to the annual accounts also provides information on intangible fixed assets, including research and development costs[1].

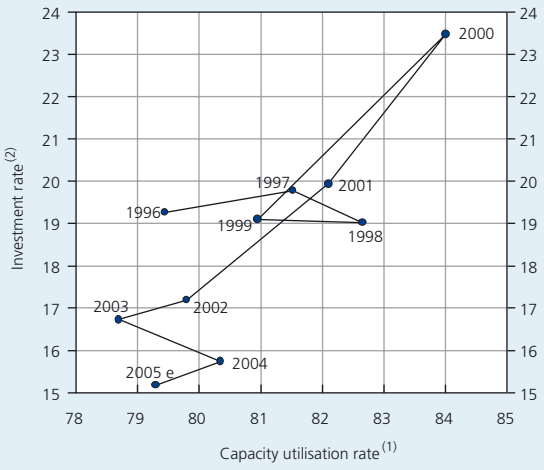
(1) The information is available only for firms filing full-format accounts. Research and development costs should be understood as the cost of research, manufacture and development of prototypes, products, inventions and know-how useful in the firm's future activities (Royal Decree of 30 January 2001 implementing the Companies Code, Article 15).

CHART 14 INVESTMENT RATE
(Percentages)



Source : NBB.

CHART 15 INVESTMENT RATE AND CAPACITY UTILISATION RATE IN MANUFACTURING INDUSTRY

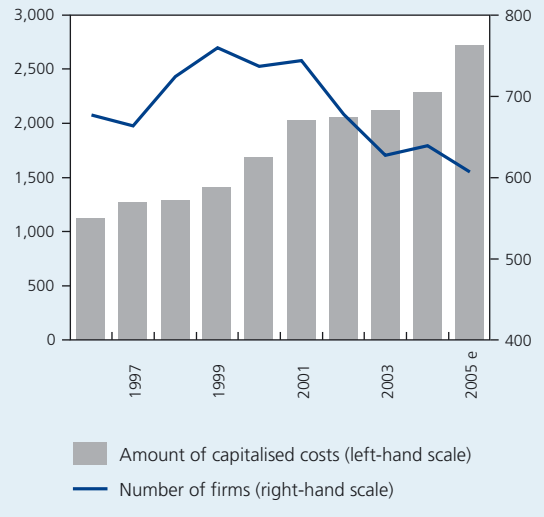


Source: NBB.
(1) Annual average.
(2) Globalised for manufacturing firms in general.

Chart 16 shows that the number of firms investing in research and development has tended to decline for some years now, falling to 607 in 2005. However, the total amounts invested in this area have increased to

CHART 16 CAPITALISED RESEARCH AND DEVELOPMENT COSTS (1)

(Millions of euros, unless otherwise stated)



Source: NBB.
(1) Acquisitions for the year, including capitalised production costs.

2.7 billion euro. The 426.8 million euro increase in 2005 is attributable to large firms, especially in the petrochemical branch and, to a lesser extent, metalworking and business services. In the chemicals branch, despite the fact that investment was down for the third consecutive year, expenditure on research and development continued to rise. In 2005, chemicals, including pharmacy, accounted for around two-thirds of all private sector research and development expenditure in Belgium.

3.5 Financial risks

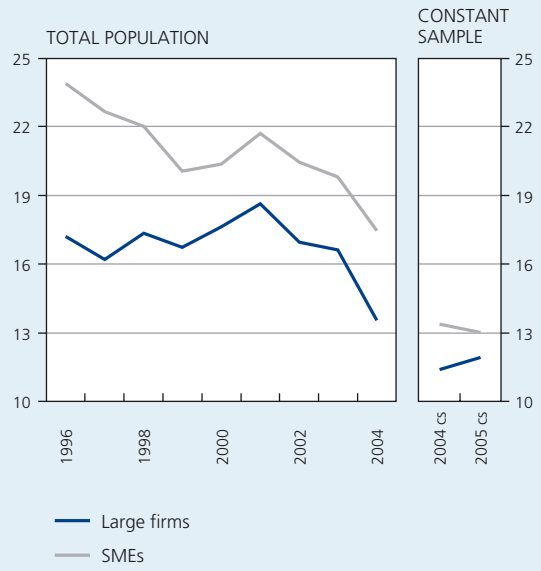
In order to assess the financial risks incurred by firms, the National Bank has developed an internal business failure prediction model, presented in previous editions of this article (1). The main attraction of the model is that it summarises all aspects of a firm's financial situation in a single figure: the risk score L. On that basis, four risk classes were defined, corresponding to intervals in the score L. They divide firms into homogenous risk zones on the basis of the percentage of failing firms:

- class 1: $L < -0.84$: healthy firms with practically zero risk of failure within three years;
- class 2: $-0.84 \leq L < 0.21$: neutral firms, where the probability of failure within three years is comparable to the average;
- class 3: $0.21 \leq L < 1.10$: firms in difficulty, where the probability of failure within three years is 3 to 4 times higher than average;
- class 4: $1.10 \leq L$: firms in great difficulty, where the probability of failure within three years is more than 10 times higher than average.

This classification of the firms must be used with caution. For one thing, only a tiny proportion (between 1.5 and 2 p.c. depending on the year) of the firms examined will actually go bankrupt or apply for judicial composition. The classification should therefore be viewed as an indication of financial health rather than a true prediction of failure: firms in classes 3 and 4 are not necessarily destined for bankruptcy, but they are prone to serious financial problems. Bankruptcy aside, those problems are liable to lead to delay in repaying debts or paying suppliers, redundancies, restructuring or cessation of activity. Another important point is that a number of Belgian firms in difficulty are members of multinational groups which are prepared to provide financial support, at least temporarily. Moreover, the classification is an incomplete

(1) See the Economic Review editions IV-2004 and IV-2005. A more detailed description of the methodology was published in Coppens F., A. Hermesse and D. Vivet (2004), "The ICT sector in Belgium", Economic Review I-2004, National Bank of Belgium, Brussels.

CHART 17 PERCENTAGE OF FIRMS IN CLASSES 3 AND 4



Source : NBB.

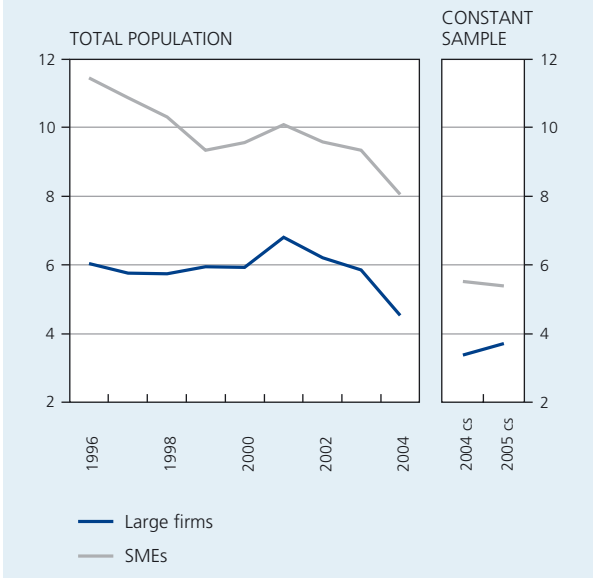
assessment of the firms' economic situation, as it is based only on analysis of the annual accounts. Other important aspects, such as management quality, the competitive environment, the economic situation and development prospects, are therefore disregarded. Thus, the classification must be viewed as a strictly financial assessment of the firms at a particular moment.

As pointed out in the first section of this article, the annual accounts filed late come from firms whose financial profile is less favourable overall. These filing delays are particularly significant in the case of firms in classes 3 and 4, which are therefore decidedly under-represented in the annual accounts currently available for the 2005 financial year. Tests conducted on previous years show that the trend in the risks observed in the constant sample is not systematically representative of the real trends; that applies particularly to SMEs, which form the very large majority of firms filing their accounts late. This methodological problem is the reason why the comments here are confined to the level of risk up to 2004. In order to provide an initial impression of the latest tendencies, the trends apparent in the constant sample are also presented, but separately.

In 2004, the proportion of firms placed in classes 3 and 4 came to 13.5 p.c. for large firms and 17.5 p.c. for SMEs (chart 17). Those firms employ a total of 172,000 workers, including 62,000 in class 4. During the three years which followed the cyclical trough of 2001, the risks have steadily waned (regardless of company size), reflecting the general improvement in the profitability, solvency and liquidity of Belgian firms, described earlier. According to the initial indications obtained from the constant sample, this downward trend was halted for large firms and slowed significantly for SMEs in 2005. In the case of large firms, the recent increase in the risks is due mainly to industry, but also to certain service branches such as construction and trade. As regards the risks facing SMEs, while they are stable or declining slowly in the majority of branches, they are climbing sharply in chemicals and metallurgy. Today, however, it is textiles and hotels & restaurants which have the largest number of vulnerable firms, with one quarter of firms in classes 3 and 4.

Chart 17 shows that, in line with the statistics on bankruptcies and judicial composition proceedings, the proportion of firms at risk is structurally higher for SMEs than for large firms. In addition, as is evident from chart 18, that difference is due almost exclusively to the proportion of firms in great difficulty (class 4). While the percentage of SMEs in class 3 is practically the same as that for large firms, the same cannot be said of class 4 : in 2004, 4.5 p.c. of large firms were in great difficulty, compared to 8.1 p.c. of SMEs.

CHART 18 PERCENTAGE OF FIRMS IN CLASS 4



Source : NBB.

Conclusion

In 2005, the economic context was less favourable than in 2004, owing to the weakening of both foreign and domestic demand. In these circumstances, the growth of the total value added generated by non-financial corporations slowed down, falling from 6.6 p.c. in 2004 to 4 p.c. in 2005. At the same time, operating costs increased more slowly than value added for the third consecutive year. That situation led to a further significant rise in the net operating result (+8.4 p.c.), which had already produced an exceptional increase in 2003 and 2004. In the space of three years, the operating result increased by around 12 billion euro or almost 70 p.c., essentially thanks to the control of operating costs in a generally favourable economic climate.

The financial and exceptional results recorded a very large net profit in 2005. After aggregation of all the profit and loss account items, non-financial corporations made a record net profit of almost 41 billion euro, over 50 p.c. higher than in 2004. Excluding the exceptional result, profits came to almost 30 billion euro. For the record, the net result excluding exceptional results has doubled since 2002.

Strongly influenced by fluctuations in the exceptional result, the return on equity after tax increased significantly in the leading firms in 2005. With slightly lower leverage in large firms, financial liabilities were down and financial independence remained strong. Thanks to the persistently low interest rates, average interest charges continued to fall. The net working capital of large firms and SMEs did increase, although it remained negative for more than one-third of the population. The net cash flow analysis over the period 1996-2005 also reveals that the working capital requirement of large firms tends to exceed their net working capital. The year 2005 saw the leading companies, mainly large non-manufacturing firms, catching up on their investment, after several quiet years. However, according to the median approach investment was down. The decline recorded in manufacturing industry was accompanied by a fairly significant fall in the capacity utilisation rate. The amounts invested in research and development expanded once again, but concerned a smaller number of firms. Finally, after a marked fall in preceding years, the financial risks appear to have stabilised in 2005. The vulnerability of large firms even increased slightly in 2005.

Annex 1 : Sectoral classification

SECTORAL CLASSIFICATION

	NACE-Bel code
Manufacturing industry	**15-37**
of which :	
Agricultural and food industries	15-16
Textiles, clothing and footwear	17-19
Timber	20
Paper, publishing and printing	21-22
Chemicals	24-25
Metallurgy and metalworking	27-28
Metal manufactures	29-35
Non-manufacturing branches	**01-14 and 40-95**
of which :	
Retail trade	50-52
Wholesale trade	51
Horeca	55
Transport	60-63
Post and telecommunications	64
Real estate activities	70
Business services	72-74 (1)
Energy and water	40-41
Construction	45

(1) Except 74,151 (management of holding companies).

Annex 2 : Definition of the ratios

DEFINITION OF THE RATIOS

	Item numbers allocated	
	full-format[1]	abbreviated format
1. Gross margin on sales		
Numerator (N)	70/64 + 64/70 + 630 + 631/4 + 635/7	70/64 + 64/70 + 630 + 631/4 + 635/7
Denominator (D)	70 + 74 – 740	70
Ratio = N/D × 100		
Condition for calculation of the ratio:		
70 > 0 (abbreviated format)[2]		
2. Net margin on sales		
Numerator (N)	70/64 + 64/70 + 9125	70/64 + 64/70 + 9125
Denominator (D)	70 + 74 – 740	70
Ratio = N/D × 100		
Condition for calculation of the ratio:		
70 > 0 (abbreviated format)[2]		
3. Return on equity		
Numerator (N)	70/67 + 67/70	70/67 + 67/70
Denominator (D)	10/15	10/15
Ratio = N/D × 100		
Conditions for calculation of the ratio:		
Exercice comptable de 12 mois		
10/15 > 0[2]		
4. Leverage effect		
Numerator (N)	(70/65 + 65/70) / (10/15)	(70/65 + 65/70) / (10/15)
Denominator (D)	(70/65 + 65/70 + 650) / (10/15 + 170/4 + 43 + 8801)	(70/65 + 65/70 – 65) / (10/15 + 170/4 + 42 + 43)
Ratio = N/D		
Conditions for calculation of the ratio:		
12-month financial year		
10/15 > 0[2]		
10/15 + 170/4 + 43 + 8801 > 0 (full format)[2]		
10/15 + 170/4 + 42 + 43 > 0 (abbreviated format)[2]		
5. Degree of financial independence		
Numerator (N)	10/15	10/15
Denominator (D)	10/49	10/49
Ratio = N/D × 100		

(1) In which the profit and loss account is presented in list form.
(2) Condition valid for the calculation of the median but not for the globalised ratio.

DEFINITION OF THE RATIOS (continued)

	Item numbers allocated	
	full-format[1]	abbreviated format
6. Degree to which borrowings are covered by cash-flow		
Numerator (N)	70/67 + 67/70 + 630 + 631/4 + 6501 + 635/7 + 651 + 6560 + 6561 + 660 + 661 + 662 – 760 – 761 – 762 + 663 – 9125 – 780 – 680	70/67 + 67/70 + 8079 + 8279 + 631/4 + 635/7 + 656 + 8475 + 8089 + 8289 + 8485 – 9125 – 780 – 680
Denominator (D)	16 + 17/49	16 + 17/49
Ratio = N/D × 100		
Condition for calculation of the ratio:		
12-month financial year		
7. Average interest charges on financial debts		
Numerator (N)	650	– 65 – 9125 – 9126
Denominator (D)	170/4 + 42 + 43	170/4 + 42 + 43
Ratio = N/D × 100		
Condition for calculation of the ratio:		
12-month financial year		
8. Liquidity in the broad sense		
Numerator (N)	3 + 40/41 + 50/53 + 54/58 + 490/1	3 + 40/41 + 50/53 + 54/58 + 490/1
Denominator (D)	42/48 + 492/3	42/48 + 492/3
Ratio = N/D		
9. Net cash in relation to total assets		
Numerator (N)	50/53 + 54/58 – 43	50/53 + 54/58 – 43
Denominator (D)	10/49	10/49
Ratio = N/D × 100		
10. Investment rate		
Numerator (N)	8169 + 8229 – 8299	8169 + 8229 – 8299
Denominator (D)	70/74 – 740 – 60 – 61	70/61 + 61/70
Ratio = N/D × 100		
Conditions for calculation of the ratio:		
70/74 – 740 – 60 – 61 > 0 (full format)[2]		
70/61 + 61/70 > 0 (abbreviated format)[2]		

(1) In which the profit and loss account is presented in list form.
(2) Condition valid for the calculation of the median but not for the globalised ratio.

The social balance sheet 2005

Ph. Delhez
P. Heuse

Introduction

Introduced in 1996, the social balance sheet contains a set of information concerning various aspects of employment in enterprises. That information can be used as a basis for analysing the trend in employment, staff costs and working time, the structure of employment at the end of the financial year, staff movements and employee training. In addition, the social balance sheet was intended to provide information on the use which companies made of various employment promotion measures. However, the constant adjustments to the employment policy have made that record obsolete and hence unusable, despite the efforts of the legislature to update it.

The simplification of the social balance sheet has been on the agenda for some years now. The work carried out in that connection in recent years should soon bear fruit, as the social partners have agreed on a new form which will come into effect as soon as the implementing decrees have been published. That document is not fundamentally different from the existing form, except that it no longer includes the table relating to employment promotion measures, since the NSSO is able to supply the information requested from the multi-purpose declaration that firms have been required to file since 2003. In addition, changes have been made to the tables concerning training. In order to assess all corporate training efforts more accurately, formal training, informal training and initial training will be recorded in three separate tables.

This article is divided into five sections which examine in turn the trend in employment between 2004 and 2005, staff movements during this financial year, the structure of employment (particularly working arrangements, type of employment contracts and the use of agency workers), staff costs and training.

The analysis concerns the provisional results of the social balance sheet 2005 obtained after early closure of the period for receiving the annual accounts. It is based on comparison of the information gathered for a reduced population which is the same in 2004 and 2005. Constructed in accordance with the principles described in Annex 1 section 1, this population contains all the firms which, as at 31 December 2004 and 2005, had completed a 12-month financial year and submitted social balance sheets which met a range of criteria concerning quality and consistency.

This year, the provisional closing date for the accounts was 25 September 2006, or almost three weeks later than in previous years. As a result, the number of firms included in the analysis – namely 48,976 – is higher, and this reduced population (the characteristics of which are given in Annex 1 section 2.2, table 2) is more representative: the workers employed in the constituent firms, totalling around 1,434,000 people in 2004, represent almost 80 p.c. of the total population and 54 p.c. of the private employees recorded in the national accounts (see Annex 1, section 2.1, table 1).

The analysis focuses on the developments recorded in the firms classified by branch of activity or by size. This latter classification distinguishes between small firms, which have fewer than 50 full-time equivalents (FTEs), medium-sized firms employing 50 – 250 FTEs, and large companies employing over 250 FTEs. The breakdown by branch of activity is based on the branches of the Nace-Bel nomenclature of activities given in Annex 2. The results per branch of activity need to be interpreted with caution

in the case of branches such as agriculture[1], hotels and restaurants and community, social and personal services: the workers employed in firms in the reduced population in those branches in fact represent under 30 p.c. of the paid employment recorded by the national accounts. The reason for that small percentage is that employers in those branches include a relatively large number of self-employed operators – who are not required to file a social balance sheet.

Most of the tables and charts in this article present the results obtained from the reduced population of firms. Use of this constant population permits analysis of the movement in a range of variables between the 2004 and 2005 financial years, whereas comparison with the complete data for 2004, which cover a much larger population, would introduce a bias which would distort the conclusions. However, the use of a constant population does impose constraints on the interpretation of those trends as, by definition, the firms which are included in that population must have filed social balance sheets of adequate quality, covering a 12-month financial year ending on 31 December for two successive years. This automatically excludes new firms and bankrupt companies from the scope of the analysis, possibly causing some discrepancies between the changes observed in the reduced population and those recorded for the total population. However, the adoption of this approach is justified in view of the excessive length of time required to obtain information for all firms, and the safeguards offered by the representativeness of the reduced population.

Where long series appear in the tables and charts, they always (unless otherwise stated) concern the results obtained for the total population, calculated for the years 1998-2004[2]. The changes recorded between 2004 and 2005 for the reduced population are sometimes used to extend these historical series: they are marked "2005e". As every year, detailed data per branch of activity are given in Annexes 3 to 9. In the majority of cases, these tables present, alongside the changes recorded between 2004 and 2005, retrospective data for the years 1998 to 2004.

(1) This branch is included in Annexes 3 to 9, but the body of this article contains no comments on the corresponding results.

(2) The data relating to the total populations comprise the results for firms which, as at 31 December, have completed a standard 12-month financial year and whose social balance sheets respect the same quality and consistency criteria as the reduced population (see Annex 1). That means that the results appearing in this study differ from the aggregate data published by the Central Balance Sheet Office. This last source in fact uses all the annual accounts made up during a calendar year, whatever the closure date and the length of the financial year.

1. Employment development

In the 48,976 firms in the reduced population, the average workforce increased by 7,814 persons between 2004 and 2005, a rise of 0.5 p.c. This growth reflects the expansion of the part-time workforce, which increased by 15,498 units, or 4.7 p.c., while the number of full-time employees contracted by 7,684 persons, or –0.7 p.c. The strong expansion of part-time working meant that the total volume of employment in terms of FTEs increased slightly, by 0.2 p.c., during this period.

The reduced population presented no apparent difference between the increase in the number of persons employed recorded as an average during the year and the growth figure recorded at the end of the year, both being equal to 0.5 p.c., whereas during 2005 the national accounts reported a slowdown in the growth of private paid employment. It should be remembered that the results obtained from the social balance sheets are based on a constant population, so that changes in employment due to the creation or closure of companies cannot be taken into account. On the other hand, the volume of employment in terms of FTEs indicates a slowdown in growth during the year, since the 0.2 p.c. increase in the number of FTEs, recorded on average over the year, gave way to a stabilisation between 31 December 2004 and 2005.

As at 31 December 2005, the firms in the reduced population employed 6,999 more workers than a year previously. The male workforce declined by a total of 1,406 units, as the increase in the number of part-time workers (totalling 4,697 units) was insufficient to offset the contraction of the full-time workforce (–6,103 units). In contrast, the female workforce continued to grow by a total of 8,405 units, despite the albeit minor fall in the number of women working full time (–1,390 units). Altogether, in firms in the reduced population, women represented 37.7 p.c. of the workforce in 2005, against 37.3 p.c. a year earlier.

It was mainly firms with fewer than 50 FTEs that increased their average workforce: they recorded almost 9,700 extra jobs (of which two-thirds concern full-time workers), representing an increase of 2.4 p.c. In medium-sized firms, the staff expanded by around 4,000 units, or 1.3 p.c., the main factor being the growth of the part-time workforce. In contrast, large firms saw a decline in employment, down by almost 5,800 units or 0.8 p.c. of the workforce. Here, full-time workers decreased by around 14,100 units, while the part-time workforce expanded by over 8,300 units.

TABLE 1 EMPLOYMENT DEVELOPMENT BETWEEN 2004 AND 2005
(Reduced population)

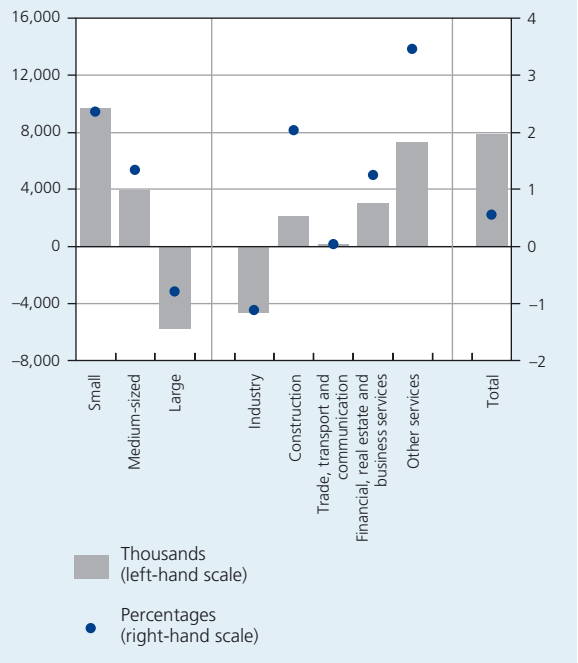
	Persons employed			FTEs
	Full-time	Part-time	Total	
Annual averages				
Units	–7,684	15,498	7,814	2,227
Percentages	–0.7	4.7	0.5	0.2
As at 31 December				
Units	–7,493	14,492	6,999	59
of which:				
Men	–6,103	4,697	–1,406	–3,538
Women	–1,390	9,795	8,405	3,597
Percentages	–0.7	4.3	0.5	0.0

Source: NBB (social balance sheets).

An increase in part-time working was recorded to varying degrees in all branches of activity. Conversely, the full-time workforce declined except in construction and the other services branch. Altogether, 4,700 jobs were lost in industry, a decline of 1.1 p.c. The cuts were made in equal proportions in the mining and quarrying and manufacturing industries and in energy and water. In trade, transport and communication, employment remained steady, the rise recorded in trade being offset by the reduction in transport and communication, while employment remained unchanged in the hotel and restaurants branch.

The trend was more favourable in other branches of activity. In construction, the rise in employment totalled around 2,100 units, or 2 p.c. The large expansion seen in real estate and business services (+5,000 persons or 3.7 p.c.) more than offset the significant fall in employment in financial and insurance services (–2,000 persons or –1.9 p.c.), so that, overall, employment expanded by more than 3,000 units (1.3 p.c.) in the financial, real estate and business services branch. Other services was the branch with the most substantial increase: here the number of persons employed in 2005 was 7,300 units higher than a year earlier, representing a growth of 3.5 p.c. Both community, social and personal services and health and social work services recorded a significant increase in their staff, respectively totalling 600 persons (or 2.2 p.c.) and 6,700 persons (3.6 p.c.). This last branch includes, in particular, some firms whose services are paid by means of service vouchers, which have seen strong growth since they were introduced.

CHART 1 DEVELOPMENT IN EMPLOYMENT BETWEEN 2004 AND 2005: BREAKDOWN BY SIZE AND BY BRANCH OF ACTIVITY
(Annual averages, reduced population)



Source: NBB (social balance sheets).

2. Staff movements

2.1 Staff recruitment and departures in firms as a whole

The change in the number of workers employed is due to the staff movements recorded during the year: new workers come into a firm's service, while some staff leave their employer, either spontaneously or otherwise. It is these external movements recorded in a special table in the social balance sheet that are analysed in this section. Internal changes also affect the composition of the existing staff (such as the relative percentages of the various working arrangements or employment contracts) examined in section 3.

The staff movements recorded in 2005 reflect a less buoyant employment picture than in the previous year. The number of new staff entered in the register totalled 479,896 workers, 1 p.c. fewer than in 2004. Conversely, staff departures numbering 470,809 units increased. In all, net recruitment – i.e. the difference between total staff joining and leaving – totalled just over 9,000 units in 2005, which was half as many as in the previous year.

A decline in the number of net recruitment was recorded in varying degrees in all categories of firms. Thus, in those with fewer than 50 FTEs, net recruitment totalled around 7,800 persons in 2005, representing a 40 p.c. fall compared to the previous year. The contraction was hardly any smaller in medium-sized firms, where net recruitment was down by 30 p.c. at 3,700 units, while in large firms the virtual stabilisation of the workforce recorded in 2004 gave way to staff cuts totalling around 2,400 units in 2005.

TABLE 2 STAFF RECRUITMENT AND DEPARTURES

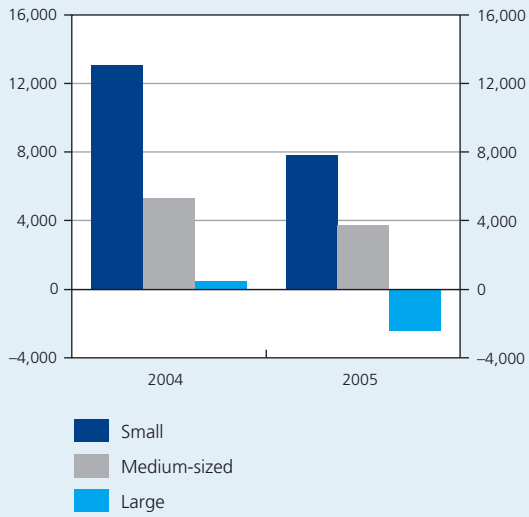
(Persons, reduced population)

	2004	2005
Recruitment		
Total	484,801	479,896
of which: full-format accounts	292,211	281,658
Departures		
Total	466,035	470,809
of which: full-format accounts	284,378	278,241
Net recruitment		
Total	18,766	9,087
of which: full-format accounts	7,833	3,417

Source: NBB (social balance sheets).

CHART 2 NET STAFF RECRUITMENT[(1)]: BREAKDOWN BY SIZE

(Persons, reduced population)



Source: NBB (social balance sheets).
(1) Difference between total staff recruitment and total departures.

During 2005, net staff recruitment mainly concerned full-time workers in SMEs: the latter represented 84 p.c. of net recruitment in small firms and 64 p.c. in medium-sized firms. In large firms, net departures of full-time workers exceeded those of part-time workers.

2.2 Staff recruitment and departures in firms filing full-format accounts

The information on staff recruitment and departures differs according to the size of firms, as companies filing short-format accounts are only required to state the type of working arrangements for these people. Conversely, firms filing full-format accounts have to specify the contract of employment, sex and standard of education of the workers joining and leaving. In addition, departures have to be broken down according to the reason for leaving.

In firms filing full-format accounts, which represented only 18.4 p.c. of the total firms but 78.5 p.c. of the workforce in 2005, 281,658 workers were taken on during the year under review, while 278,241 were crossed off the staff registers. Altogether, the workforce

expanded by 3,417 units during the year, against 7,833 during 2004.

2.2.1 Standard of education of the workers

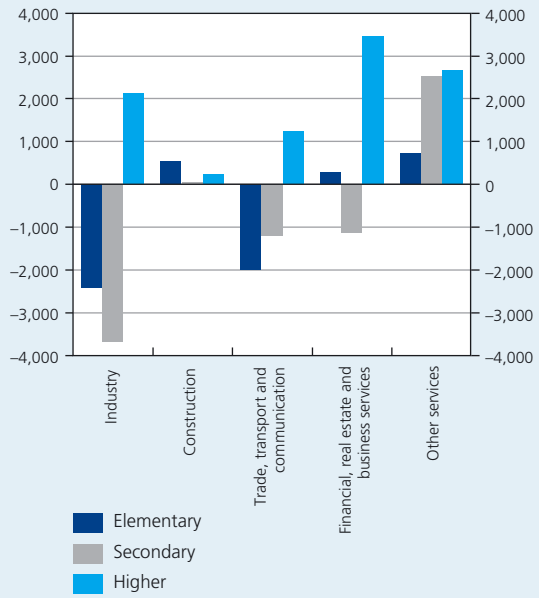
In 2005, employers recorded net recruitment of workers with higher education qualifications totalling 9,800 units, while net departures were recorded for those holding a certificate of elementary education (–2,900 units) and secondary education (–3,500 units). Net departures of workers who have only completed elementary education were recorded in industry and in trade, transport and communication. Cuts in the number of personnel educated to secondary level were also seen in these two branches, and in financial, real estate and business services. In contrast, the construction branch recorded net recruitment of workers educated to elementary level, outstripping the growth of the highly-skilled workforce, which is hardly surprising in that many of the tasks to be performed demand skills acquired on the job. The financial, real estate and business services branch and the other services branch also saw an increase in the number of workers who had only completed elementary education, although the rise was moderate in relation to total net recruitment. Other services was the only branch recording a significant increase in workers who had completed secondary education. In contrast, the number of workers with higher education qualifications increased in varying degrees in all branches.

However, workers who have completed only elementary or secondary education continue to represent the bulk of recruitment: the former make up 19 p.c. of total workers taken on in 2005, and the latter 57 p.c. According to the labour force survey, this latter category of personnel represents only 39 p.c. of total paid employment, which means that a higher proportion of these workers change jobs during their working life.

Analysis by type of education profile reveals notable differences in the case of persons taken on full time. They represent 76 p.c. of male workers recruited, but only 47 p.c. of females taken on. The average standard of education of women recruited full time in 2005 is higher than that of men: 25 p.c. held higher non-university qualifications and 10 p.c. were university graduates, against 16 and 9 p.c. respectively for men. Conversely, women who had completed only elementary education represented just 12 p.c. of female recruitment, against 19 p.c. for men. In the case of part-time personnel taken on, the differences of profile between men and women are negligible. Part-timers comprise a considerably larger percentage of low-skilled persons and a smaller proportion of highly qualified staff than the full-time workforce.

CHART 3 NET STAFF RECRUITMENT[(1)] IN 2005: BREAKDOWN BY BRANCH OF ACTIVITY AND STANDARD OF EDUCATION

(Persons, reduced population, full-format accounts)



Source: NBB (social balance sheets).
(1) Difference between total staff recruitment and total departure.

On recruitment, the average standard of education of persons employed part-time is therefore significantly lower than that of full-time workers.

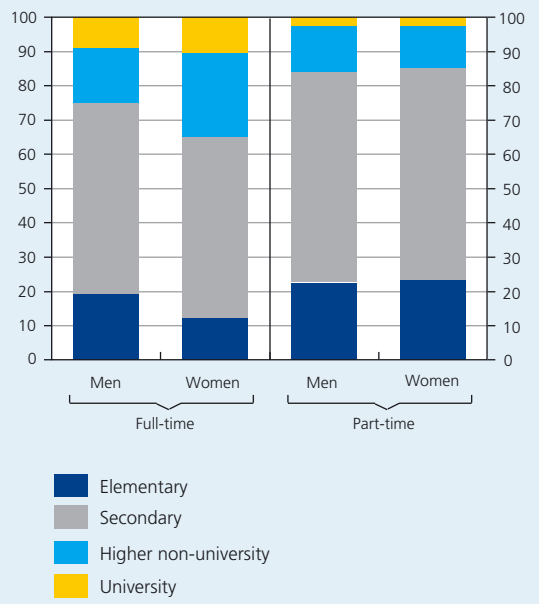
2.2.2 Type of contract

The mobility of temporary workers obviously accounts for a substantial proportion of staff movements during any year. Thus, in 2005, fixed-term contracts represented 49.1 p.c. of total recruitment and 45.5 p.c. of departures. The temporary nature of the link between employer and worker makes it possible to use these contracts for various purposes: to cope with a temporary surplus of work, to test workers' skills during a probationary period, or to satisfy the obligations on employers concerning the employment of trainees. In the case of workers employed under this type of contract, staff turnover is therefore very high, as it is for workers recruited as substitutes for members of the permanent workforce (4.5 p.c. of recruitment in 2005) or to carry out a specific project (1.1 p.c.).

The link between employer and worker is considered to be more stable in the case of permanent contracts; that explains why the proportion of workers on permanent contracts remains high, even though they do not account

CHART 4 STAFF RECRUITMENT IN 2005: BREAKDOWN BY SEX, WORKING ARRANGEMENTS AND STANDARD OF EDUCATION

(Percentages of the total, reduced population, full-format accounts)



Source: NBB (social balance sheets).

for the majority of staff recruitment (45.3 p.c. in 2005). Nonetheless, there is still some turnover in staff employed under permanent contracts owing to natural wastage, or termination of contracts at the worker's or employer's instigation.

The turnover rate for workers on permanent contracts is calculated by comparing the number of staff departures during the year with the workforce recorded at the beginning of the year. In 2005, in the reduced population, it came to 12.8 p.c., which was slightly lower than in the previous year.

The staff turnover rate varies greatly according to firm size and branch of activity. Thus, in small firms it was close to 22 p.c. in 2005, while it was half that in firms employing over 250 FTEs. These differences are due partly to better organised career management in large firms, where it is easier to switch jobs and the options are more varied. Moreover, the growth of earned incomes is often more structured there than in small firms.

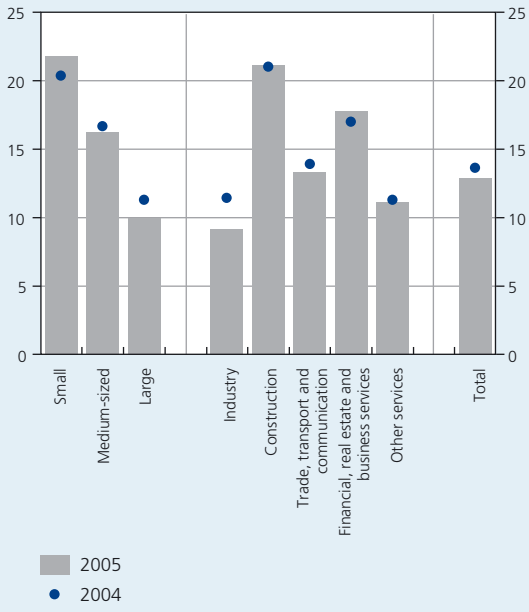
The branches of activity containing the most large firms are also the ones with the lowest staff turnover rates. For example, in industry, the rate was below 10 p.c. in 2005. The same applied in transport and communication, financial and insurance services, and health and social work. Conversely, a much larger proportion of staff departures occurred in construction (around 21 p.c.) and in real estate and business services (almost 30 p.c.). In the community, social and personal services branch and in the hotel and restaurants branch, both branches where the social balance sheets record only part of the total volume of employment, these rates appear to be in the region of 40 and 50 p.c. respectively. In the majority of cases, this high rate of external mobility is probably due to the arduous nature of the work for comparatively low pay.

2.2.3 Reasons for leaving

In firms in the reduced population filing full-format accounts, gross staff departures declined by 2.2 p.c. between 2004 and 2005, falling from 284,378 to 278,241 units. A decline was recorded in respect of most of the reasons for leaving, except the expiry of temporary contracts, whether concluded for a specified period, for substitution or for the execution of a specific project. As already stated, contract expiry – by definition – accounts for a large proportion of staff departures. In 2005, this

CHART 5 RATE OF TURNOVER (1) FOR WORKERS EMPLOYED UNDER PERMANENT CONTRACTS IN 2004 AND 2005

(Percentages, reduced population, full-format accounts)



Source: NBB (social balance sheets).

(1) Number of staff departure in t, divided by the workforce recorded at the end of the year t reduced by staff recruitment and increased by departure recorded during this year.

TABLE 3 STAFF DEPARTURES: BREAKDOWN BY REASON
(Reduced population, full-format accounts)

	Percentages of the total		Units
	2004	2005	2005
Retirement	2.5	2.6	7,123
Early retirement	3.8	3.0	8,320
Redundancy	17.4	16.2	44,983
Expiry of temporary contract (1)	48.9	50.4	140,112
Other reason (2)	27.5	27.9	77,703
Total	**100.0**	**100.0**	**278,241**

Source: NBB (social balance sheets).
(1) Fixed-term contracts, substitution contracts and contracts for a specific project.
(2) Agreement between worker and employer, death in service.

was the reason for half of the departures recorded in firms in the reduced population filing full-format accounts, or just over 140,000 units.

The largest decline was seen in staff leaving to take early retirement, their number dropping from 10,688 units in 2004 to only 8,320 in 2005, a 22.2 p.c. fall. This reduced their share of total departures from 3.8 to 3 p.c. between 2004 and 2005. The manufacturing industry branch made substantial use of early retirement: in 2005, it accounted for more than half of the total early departures from the staff registers. Although the numbers taking early retirement declined sharply in this branch, the decline was most marked in transport and communication. In 2004, over 2,000 workers had left the labour market in this way, with a particularly large number of workers leaving the Postal Service. In 2005, the figure was less than 500.

The number of redundancies also declined – by just under 10 p.c. – to around 45,000 units in 2005, or 16.2 p.c. of total departures, compared to 17.4 p.c. a year earlier. There was only a small reduction in the numbers retiring, representing around 2.5 p.c. of departures, or just over 7,000 workers, in both 2004 and 2005. Finally, the number leaving for other reasons – mainly departures due to an agreement between the worker and the employer, but also death in service – remained more or less stable: just under 78,000 workers left the firms in the reduced population in this way in 2005, or around 28 p.c. of total departures.

3. Employment structure

While staff recruitment and departures are likely to change the employment structure from one year to the next, the same is true – if not more so – of changes affecting existing staff. However, these changes cannot be identified as such in the social balance sheet. Their significance can only be understood by comparing the situations observed between two closure dates and staff movements during the year. In view of the structure of the social balance sheet, that exercise can only be carried out for a small number of variables: the working arrangements for all firms taken together and the type of employment contracts for those filing full-format accounts. Moreover, this exercise has its defects, since the staff changes recorded between 31 December in one year and the next are not always equal to net staff recruitment and departures.

3.1 Full-time and part-time employment

For several years now, the expansion of employment has been sustained by the growth of part-time working. From a static point of view, job sharing enables the volume of work necessary for production to be spread among a larger number of people. From a dynamic point of view, part-time work permits the development of new activities. In some firms, if some of the staff switch to part-time working, that can attenuate the effects of restructuring or make it easier for people to adapt to retirement. In addition, it accords with the wishes of some workers who want to achieve a better balance between their working life and the needs of their family.

Part-time working has been increasing steadily in firms required to submit a social balance sheet. In 1998, one in five workers was employed part-time; in 2004, it was one in four. The changes seen in the reduced population indicate a further rise of almost 4 p.c. in the proportion of part-timers. Part-time working was already very widespread among the female working population, since almost half of all women employed work part-time, but there was a further 2.2 p.c. increase in the proportion of women working part time between 2004 and 2005. However, the increase was even more marked for men, since it totalled 6.2 p.c. By applying this increase to the proportion of part-time workers recorded in the total population in 2004, it is estimated that 10 p.c. of men now work part time.

The further increase in this type of working arrangement is due only partly to the recruitment of part-time workers, as the latter represented only 39 p.c. of the total staff recruitment recorded during 2005. Taking account

TABLE 4 PART-TIME EMPLOYMENT FROM 1998 TO 2005

(Percentages of the corresponding employed population, data as at 31 December)

	Men	Women	Total
Total population			
1998	6.2	43.0	20.0
1999	6.7	43.7	20.8
2000	7.0	44.0	20.7
2001	7.3	45.4	21.9
2002	8.2	47.1	23.4
2003	9.2	48.5	24.6
2004	9.8	49.2	25.4
Reduced population			
2004	8.7	48.2	23.4
2005	9.3	49.2	24.3
p.m. Percentage changes	*6.2*	*2.2*	*3.8*

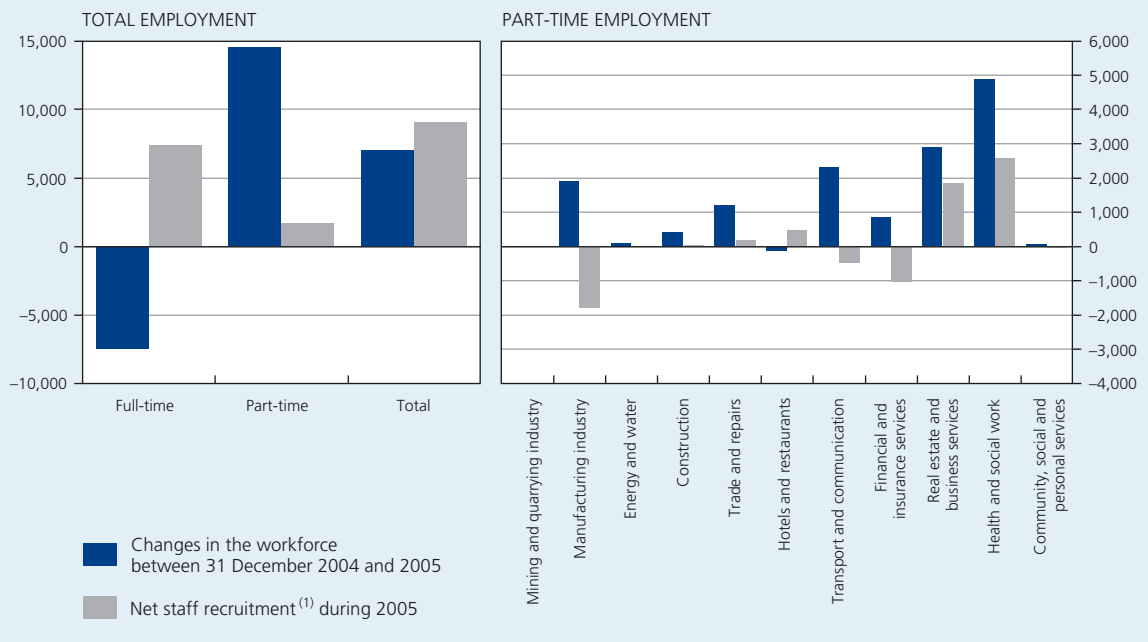
Source: NBB (social balance sheets).

of departures, net recruitment of part-time staff totalled just under 1,700 persons during the period under review, whereas net full-time recruitment exceeded 7,400 units over the same period. In contrast, the staff registers record an increase of almost 14,500 units in the part-time workforce, while the number of full-timers was down by 7,500 units. This implies that a number of full-time workers opted for working arrangements entailing reduced hours during 2005. Of these, there are probably many who took advantage of the facilities offered by the various time-credit schemes to reduce their working hours, either for a specific period or until the end of their working life, as it is now possible for workers aged over 50 years.

According to NEMO's annual report, the numbers reducing their working hours by means of the time-credit scheme increased by an average of 27 p.c. between 2004 and 2005, and concerned a total of more than 76,000 workers. Of these, 55 p.c. are aged 55 or over and are using this scheme to adjust to their retirement. Men represent almost one in four scheme users. The NEMO report does not specify the branches of activity where this scheme is particularly popular, but the information obtained from the social balance sheets shows that changes in working arrangements for existing staff are particularly common in manufacturing industry, transport and communication, and in health and social work. The data by size of firm suggest that these changes occur mainly in companies with over 250 FTEs. However, the time-credit scheme

CHART 6 STAFF MOVEMENTS DURING 2005: BREAKDOWN BY WORKING ARRANGEMENTS

(Persons, reduced population)



Source: NBB (social balance sheets).

(1) Difference between total staff recruitment and total departures.

is a worker entitlement which employers cannot refuse, although they may postpone implementation. In firms with up to ten workers, the exercise of this right is subject to the employer's approval.

While net departures of part-time workers were recorded in manufacturing industry totalling almost 1,800 units, significant internal staff movements contributed towards the growth in the total part-time workforce, which expanded by over 1,900 units in 2005, although the latter still represented only 11 p.c. of total employment. In transport and communication, internal changes also offset the net departures of part-timers (–500 units). Altogether, part-time working increased by 2,300 units in 2005, thus representing 17.6 p.c. of the total, or 1.4 percentage points more than in 2004. On the other hand, in the health and social work branch, internal changes added to the net recruitment of part-time workers so that the rate of part-time working increased by 0.8 percentage point. This is the branch where this working arrangement is most clearly successful, since 53.1 p.c. of employees worked reduced hours in 2005. The reason can probably be attributed to the large proportion of women in this branch (around 80 p.c.) and the working hours (with compulsory night/week-end work) which are not very compatible with family life.

In the other branches of activity, changes to working arrangements for existing staff – which varied widely in extent but were on a smaller scale – boosted part-time working everywhere, except in the hotel and restaurant branch where, despite net recruitment of part-timers, the size of the part-time workforce declined.

3.2 Permanent and temporary employment

Contracts concluded for a fixed term, including temporary employment agency contracts, are a much more flexible instrument than part-time employment for adjusting the volume of labour in line with production requirements. At times when the economy is slowing down, there is generally a decline in the use of these contracts, whereas the expansion of temporary agency employment is often one of the first signs of a revival or acceleration in activity.

The full-format social balance sheets contain more information than those in the short-format on the use which firms make of these various types of contracts, so that a separate section has been devoted to them.

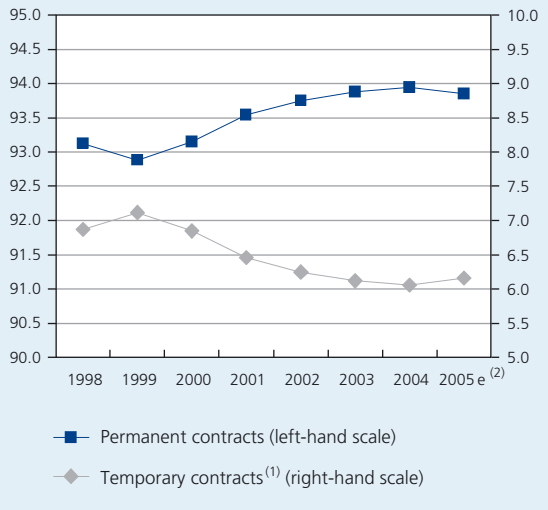
3.2.1 Temporary employment in firms as a whole

Although it had increased between 1998 and 1999, the proportion of persons entered in the staff register with a temporary employment contract, i.e. a fixed-term or substitution contract or one concluded for a specific project, declined gradually from 7 to 6.1 p.c. of total employment between 1999 and 2003, and then remained steady.

The information obtained from the reduced population does not imply any change of trend: the proportion of temporary workers hardly varied here between 2004 and 2005. True, there was a small rise in the case of SMEs, but it does not affect the general trend since the relative importance of these firms is small, and they make proportionately less use of temporary employment. However, over the long term there is some convergence in the behaviour of the three groups of firms in regard to the use of temporary contracts. In small firms, their share increased from 4.3 to 5.3 p.c. between 1998 and 2004, whereas it showed a marked fall from 8.9 to 6.7 p.c. in large companies. In medium-sized firms, where the decline (–0.5 percentage point) was smaller, that proportion totalled 6 p.c. in 2004.

CHART 7 RELATIVE IMPORTANCE OF TEMPORARY [1] AND PERMANENT EMPLOYMENT CONTRACTS BETWEEN 1998 AND 2005

(Percentages of the total, data as at 31 December, total population)



Source: NBB (social balance sheets).

(1) Temporary contracts: fixed-term contracts, substitution contracts or contracts concluded for a specific project.

(2) The results for 2005 were calculated by applying the change recorded between 2004 and 2005 for the reduced population to the value observed for the total population in 2004.

Temporary employment remained fairly stable in the various branches of activity between 2004 and 2005. That applies in particular to the health and social work branch, where these contracts – which are especially widespread – accounted for 11.5 p.c. of paid employment in 2005, but also in manufacturing industry, construction, trade, and transport and communication. A decline, albeit minor (–0.3 percentage point) was recorded in the hotel and restaurant branch, where 10.9 p.c. of personnel were temporary workers in 2005. The largest increases were recorded in the real estate and business services branch (+0.7 percentage point), the mining and quarrying industry (+0.5 point) and community, social and personal services (+0.4 point). In real estate and business services, the percentage of temporary contracts in 2004 was one of the lowest in the reduced population. The rise in 2005 is worth mentioning, since it partly made up the difference in relation to the other branches.

3.2.2 Temporary and agency employment in firms filing full-format accounts

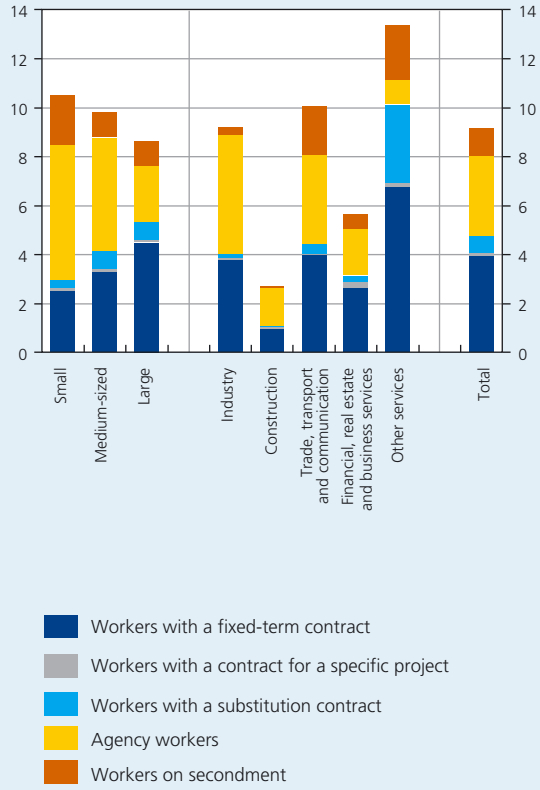
The social balance sheets of firms filing full-format accounts provide information on all jobs arranged on a temporary basis, both for workers entered in the staff register and for agency workers or those on secondment in another firm, being made available by their regular employer who thus hands over part of his authority. Only data in terms of FTEs are available for these last two types of contract. In this section, the number of workers recorded in the staff register is therefore also expressed in terms of FTEs.

Altogether, registered and non-registered temporary workers represented just over 9 p.c. of total employment in terms of FTEs in firms in the reduced population filing full-format accounts. Of these temporary workers, over half were recorded in the staff register under fixed-term contracts (43 p.c.), substitution contracts (8 p.c.) or contracts for a specific project (just 1 p.c.). Almost 36 p.c. were agency workers and around 13 p.c. workers on secondment.

The bigger the firm, the larger the proportion of workers on permanent contracts. In small companies, 10.5 p.c. of workers have a temporary contract, compared to 9.8 and 8.6 p.c. respectively in medium-sized and large firms. The type of temporary contract used also differs considerably. Small firms prefer to use agency staff (52 p.c. of the total), while workers on fixed-term contracts and those on secondment represent respectively 24 and 20 p.c. of temporary staff. In medium-sized firms, agency workers represent just under half of the temporary contracts (47 p.c.), but fixed-term contracts are much more common (33 p.c.)

CHART 8 RELATIVE IMPORTANCE OF NON-PERMANENT EMPLOYMENT CONTRACTS IN 2005

(Percentages of total employment in FTEs, reduced population, full-format accounts)



Source : NBB (social balance sheets).

and persons on secondment here represent only 11 p.c. of the total. Finally, substitution contracts – which are unusual in small firms – represent around 8 p.c. of temporary employment in medium-sized companies. The relative importance of these last two types of contract is similar in large firms. On the other hand, the shift in favour of fixed-term contracts is even more marked, as the latter represent over half of temporary employment, while the share of agency staff is only 27 p.c.

With 13.4 p.c. of temporary workers, the other services branch is the one with the highest proportion of flexible contracts. Agency working is not widespread here. On the other hand, this branch records the highest rates of usage of fixed-term contracts (6.8 p.c. of total employment), workers on secondment (2.3 p.c.) and substitution contracts (3.2 p.c.). The latter are over-represented in this branch of activity : 70 p.c. of all workers with this type of contract are employed in the other services branch.

In the trade, transport and communication branch, 10 p.c. of FTEs have temporary contracts. The commonest are fixed-term contracts (39 p.c. of the total) and agency contracts (36 p.c.). Workers on secondment (20 p.c.) are also relatively numerous. The financial, real estate and business services branch also favours these three types of contract, but temporary employment is less developed here, representing only 5.6 p.c. of FTE employment. The percentage of agency workers is similar here, but almost half of temporary workers have a fixed-term contract and one in ten is on secondment.

Conversely, this last formula is very little used in the secondary sector. In both industry and construction, most temporary workers are agency employees (53 and 58 p.c. respectively) or persons on fixed-term contract (41 and 35 p.c. respectively). Other contracts are still of marginal importance. However, there are great differences between these two branches in the use of temporary workers : it is more than three times higher in industry, where temporary workers represent 9.2 p.c. of total employment, than in construction. The fact that building sites have only been permitted to use agency workers since January 2002 suggests that there is potential for further expansion in the latter branch.

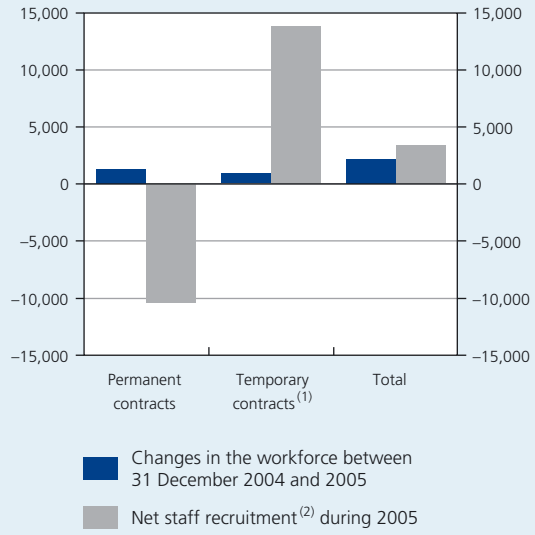
The majority of persons employed under temporary contracts are destined to remain with their firm for only a short time. However, there are others who are offered a permanent job once their temporary contract has expired. That is revealed by analysis of the net staff movements and changes in the workforce at the end of the financial year in firms filing full-format accounts, by identifying changes of contract concerning workers registered under temporary contracts during 2005. Conversion to a permanent contract cannot be verified in the case of agency staff and persons on secondment, since they are not recorded in the staff register.

While substantial net recruitment of temporary workers entered in the staff register was recorded in 2005 (totalling almost 14,000 units) the number of temporary workers at 31 December showed hardly any increase between 2004 and 2005 (+900 units only). In contrast, despite net departures of workers on permanent contracts (over 10,000 units), the total workforce in this category expanded by around 1,300 units, revealing that considerable numbers of existing staff had their contracts converted.

As regards agency employment, only firms filing full-format accounts are required to supply information on the number of agency workers (FTEs) taken on, the hours which they worked and the costs incurred.

CHART 9 STAFF MOVEMENTS DURING 2005 : BREAKDOWN BY TYPE OF EMPLOYMENT CONTRACT

(Persons, reduced population, full-format accounts)



Source : NBB (social balance sheets).
(1) Fixed-term contracts, substitution contracts and contracts for a specific project.
(2) Difference between total staff recruitment and total departures.

The volume of agency work measured in hours worked, as recorded in the social balance sheets, represented 42 p.c. of the volume recorded by Federgon (1) for the year 2005. However, Federgon's figures are influenced by the development of the service voucher activities, which saw particularly strong growth in 2005. These activities, performed exclusively for individuals, are not included in the social balance sheets, which record only the agency workers used by companies.

The number of agency workers employed by firms in the reduced population nevertheless also increased significantly between 2004 and 2005, rising from 33,934 to 35,314 FTEs, or 3.3 p.c. of total FTE employment in 2005. In proportional terms, the volume of work performed by these agency staff is even greater, representing 4 p.c. of the total hours worked. The average annual working time of an agency employee, namely 1,880 hours in 2005, is in fact considerably higher than the figure for registered staff, at 1,517 hours. Conversely, the average hourly cost of an agency worker (which includes in addition to the worker's wages the fee for the services provided by the agency) is less than the average hourly cost of a registered

(1) Federation of temporary employment agencies.

TABLE 5 TEMPORARY AGENCY WORK IN FIRMS FILING FULL-FORMAT ACCOUNTS

(Reduced population)

	2004	2005
As a percentage of the total		
Number of FTEs	3.1	3.3
Hours worked	3.8	4.0
Staff costs	2.6	2.7
In units		
Number of FTEs	33,934	35,314
Hours worked (thousands)	63,940	66,390
Hours worked per FTE	1,884	1,880
Staff costs per hour worked (in euro)	22.5	22.7
As a percentage of agency work recorded by Federgon		
Hours worked	43.7	41.7

Source: NBB (social balance sheets).

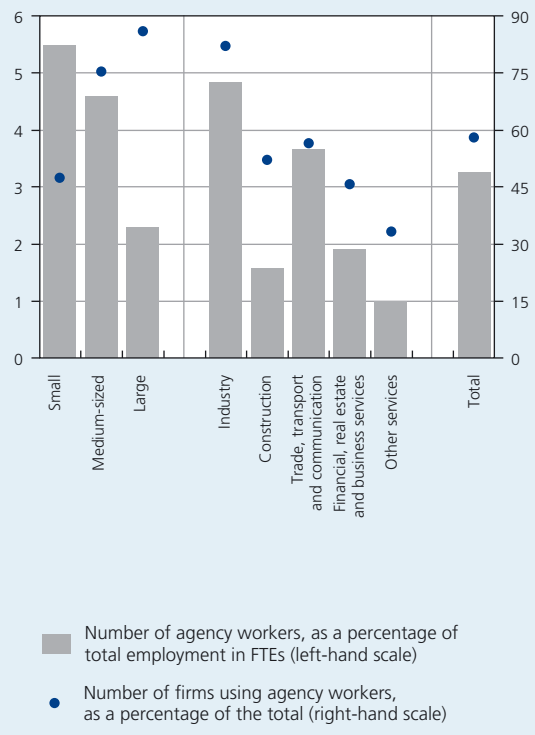
worker, at 22.7 and 34.4 euro respectively, so that the expenses incurred in employing agency staff represented, in 2005, only 2.7 p.c. of the total personnel costs of firms filing full-format accounts.

The use of agency workers is widespread. In the reduced population, almost 60 p.c. of firms filing full-format accounts used this type of labour in 2005. It is mainly firms with over 50 FTEs that employ agency workers, as fewer than 50 p.c. of small firms do so, compared to 75 p.c. in the case of medium-sized firms and 86 p.c. for large firms. However, in proportional terms, it is small firms that have the highest percentage of agency wokers in relation to total employment in FTEs. The figure was 5.5 p.c. of the workforce in firms with fewer than 50 FTEs, compared to 4.6 p.c. in medium-sized firms and only 2.3 p.c. in large ones.

Industry is the main user of agency workers: 82 p.c. of firms in this branch filing full-format accounts used them in 2005, with agency work there representing 4.8 p.c. of total FTE employment. The trade, transport and communication branch is also a major user of agency staff: 56 p.c. of firms employed them, and agency workers represented 3.7 p.c. of total FTE employment. In construction, over half of firms use this type of worker: though their relative importance remains small, it is increasing (1.6 p.c. in 2005 against 1.1 p.c. in 2004).

CHART 10 TEMPORARY AGENCY WORK IN 2005

(Percentages, reduced population, full-format accounts)



Source: NBB (social balance sheets).

4. Staff costs

The staff costs recorded in the social balance sheets comprise only payments by employers to staff entered in the register. They differ from the labour cost concept used in the national accounts in that they do not include the payments made to retired workers – who are no longer recorded in the staff register – or certain costs associated with restructuring and recorded on the balance sheet of firms as exceptional expenses. Furthermore, the picture indicated by the social balance sheets relates to a reduced population of firms, constant for 2004 and 2005, with the omissions of workers and companies which this methodology implies. Consequently, the movement in costs mentioned in the social balance sheets is not directly comparable to that calculated on the basis of the national accounts.

The staff costs incurred by firms in the reduced population increased by 2.3 p.c. between 2004 and 2005. Over the same period, the number of workers, expressed in FTEs, increased by only 0.2 p.c., so that the annual costs per FTE went up by 2.1 p.c., from 47,758 to 48,764 euro.

Table 6 Staff costs relating to workers recorded in the staff register

(Euro, annual averages, reduced population)

	Per FTE	Per hour worked		
		Per full-time worker	Per part-time worker	Total
2004	47,758	31.4	27.4	30.8
2005	48,764	32.5	28.9	31.9
Percentage changes between 2004 and 2005	2.1	3.4	5.5	3.6

Source: NBB (social balance sheets).

Since the volume of labour in terms of hours worked declined by 1.3 p.c., hourly staff costs rose faster than costs per FTE, increasing by an average of 3.6 p.c.; this rise is greater than that due to the automatic wage indexation (2.1 p.c. in 2005). The increase was slightly lower for full-time workers (at 3.4 p.c.), putting up their average hourly wage from 31.4 to 32.5 euro. For part-time workers, staff costs increased from 27.4 to 28.9 euro per hour worked, a much sharper rise (5.5 p.c.).

The change in hourly staff cost of part-time workers is often more volatile than that of full-timers. There are numerous factors which explain these differences. The costs increase with the number of workers employed part time, and also with their average wage, which is related to their characteristics in terms of jobs, qualifications, age, etc. In recent years, the success of the schemes to adjust working time, particularly for older workers, has probably boosted the incidence of part-time working, particularly among male workers. This has caused the hourly cost of part-time workers to rise more quickly since, in general, all other things being equal, older workers are paid above-average wages. Working time is influenced by the scale of the average reduction in working hours, so the decision by new part-time workers to cut their hours by half or one-fifth does have an influence. However, few changes were seen between 2004 and 2005, since the contractual working hours of a part-time employee expressed as a percentage of a full-time employee's hours remained close to 62 p.c.

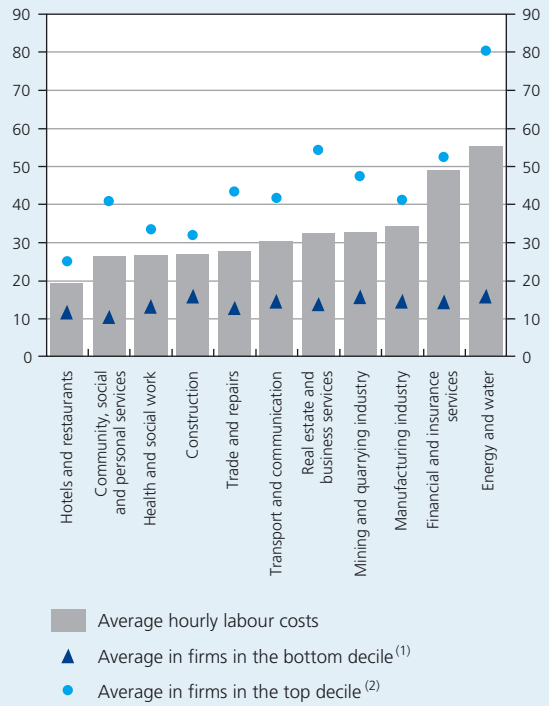
The rise in average hourly staff costs was slightly more moderate in small firms (3.6 p.c.) than in medium-sized and large companies, where it was around 4 p.c. Large differences are evident between the various branches of activity. The increase was most marked in transport and communication (6.8 p.c.), mainly because of the impact on hourly labour costs of the decline in the average annual contractual working time for Postal Service employees. At the other extreme, in the energy and water branch, average hourly costs fell by 0.7 p.c. In this branch, too, the dominant firm, Electrabel, accounts for this trend: here, a significant fall was recorded following the departure of many older workers, only some of whom were replaced, and at much lower wages. In the hotel and restaurant branch and in construction, hourly staff costs increased decidedly less sharply than the average (2 and 2.6 p.c. respectively). In the other branches, the rise in average hourly costs was between 3 and 4 p.c.

The level of hourly costs varies from one branch of activity to another. Some branches make extensive use of low-skilled workers – e.g. hotels and restaurants, and construction – while others use mainly staff with higher education qualifications. The relative power of employers and workers, the scope for productivity gains and competition conditions also explain differences. These averages per branch cannot be used to assess the scale of the actual dispersion of average costs between firms in the same branch of activity. The firms in the reduced population were therefore divided into deciles according to the individual level of hourly labour costs. Thus, for each branch, the 10 p.c. of firms with the lowest hourly costs were grouped together, and so were the 10 p.c. of firms with the highest costs. The average of the hourly costs applicable within each of these groups was then calculated.

This reveals that the dispersion of hourly labour costs is not uniform across the branches of activity. The ratio between the average costs calculated for the top and bottom deciles is around 2 in construction and the hotel and restaurant branch, 2.5 in health and social work, and nearly 3 in manufacturing, mining and quarrying industries, and in transport and communication. It is between 3.4 and 3.9 in trade, financial and insurance services, in community, social and personal services and in real estate and business services. In the energy and water branch,

CHART 11 DISPERSION OF STAFF COSTS PER HOUR WORKED IN 2005 : BREAKDOWN BY BRANCH OF ACTIVITY

(Euro, reduced population)



Source : NBB (social balance sheets).
(1) Average staff costs in the 10 p.c. of firms with the lowest hourly costs.
(2) Average staff costs in the 10 p.c. of firms with the highest hourly costs.

the staff costs in firms incurring the highest hourly labour costs are five times as high as in the bottom decile.

Despite the existence of a minimum wage across sectors, the average hourly labour costs of firms in the bottom decile range between 10 and 16 euro. The cumulative differences are considerable if monthly wages are calculated. In firms in this bottom decile, the lowest hourly labour costs are recorded in firms in the community, social and personal services branch and in the hotel and restaurant branch (under 12 euro), the highest in construction, the three branches of industry, and transport and communication (over 14.5 euro).

In firms in the top decile, the differences between branches of activity are even greater. Companies offering the best pay conditions in the hotel and restaurant branch – just under 25 euro per hour worked – incur labour costs which are three times lower than in firms of the energy and water branch, where workers cost on average 80 euros per hour worked. Although this last branch of activity is an extreme, in mining and quarrying industry, in financial and insurance services and in real estate and business services, the average wages are nevertheless twice as high as in the hotel and restaurant branch.

5. Training

The social balance sheet makes it possible to measure the training efforts of firms exhaustively on an annual basis [1]. It comprises two tables, one concerning formal training and the other dealing with mentoring activities resulting from the law of 5 September 2001 promoting the employment rate of workers.

5.1 Formal training

Formal training covers the training courses and programmes run by a person trained for the purpose in premises devoted to that activity. The organisation of these activities is planned according to the needs of the trainer. Employers are required to state the number of trainees, the hours spent on these activities and the costs incurred by the firm. The concept of training costs is understood in the broad sense, i.e. not only the costs invoiced, the trainers' pay and the various logistical costs associated with these activities, but also the wage of the trainees and specific contributions to the sectoral and social security funds, less any subsidies received.

In 1998, under the central agreement for 1999-2000, the social partners had set a quantified target for the training budget : in 2004, the training costs borne by all firms in the private sector were to represent 1.9 p.c. of labour costs. Intermediate targets had been set for the years 2000 (1.4 p.c.) and 2002 (1.6 p.c.).

In 2003, at the Employment Conference, a target for participation in training was added : by 2010, one in two workers must have access to training each year. It was also agreed to redefine the instruments measuring firms' training efforts.

At the end of 2005, under the Generation Pact, the government asked the social partners to ensure that these commitments were fulfilled, and to define new growth paths, including at sectoral level. However, the Pact stipulates that the target of 1.9 p.c. of the wage bill to be spent on training must now be achieved in 2006 as

(1) For a report on the years 1998 to 2004, see Heuse P., 2006, "L'effort de formation des entreprises en Belgique : un bilan des années 1998 à 2004", in Guyot, J.-L., et Mainguet C. (éds), *La formation professionnelle continue. Stratégies collectives*, Brussels, Belgium, De Boeck.

a minimum. The need for equal access to training was once again emphasised, to avoid discriminating against certain groups of workers, particularly older or less skilled persons.

The social balance sheet does not allow assessment of the access to training of these various population groups. The information supplied by firms in the social balance sheets consists of global data, broken down only by sex, which is therefore the only dimension that can be ascertained. Differentiation by age, standard of education or nationality requires the use of other instruments, such as the labour force survey, but the latter has the drawback of not being exhaustive and of being based on answers given by individuals rather than firms.

Nonetheless, the proportion of firms stating that their workers take part in training activities remains extremely low so far, especially in the smallest organisations. In 2004, the 5,244 firms providing training represented 6.9 p.c. of all firms filing social balance sheets, the lowest proportion recorded since 1998. However, the information obtained from the reduced population for 2004 and 2005 suggests some improvement, since the proportion of training firms has risen by 2 p.c.

The volume of training activities depends on many factors. The economic situation is one of them, but the requirements dictated by the management of companies, at individual level, exercise a dominant influence. Investment programmes, the needs resulting from redeployment or restructuring, the inflow of new workers, the application of a new employment agreement or an increased use of regional or sectoral training subsidies may thus have a considerable impact on the size of the training budget, which therefore varies greatly from year to year.

The total training budget has been shrinking steadily since the beginning of the decade, falling from almost 940 million euro in 2001 to less than 850 in 2004 in the total population. Between 2004 and 2005, in the reduced population, a further decline of almost 5 p.c. was recorded. Since staff costs increased by 2.3 p.c. over the same period, the indicator of firms' financial effort devoted to training (i.e. the ratio between the training budget and total staff costs) dropped by almost 7 p.c. Since the year 2000, when it peaked at 1.42 p.c., this indicator has steadily diverged further from the 1.9 p.c. target set in 1998. By applying to the 2004 level the change recorded between 2004 and 2005 in the reduced population, it is estimated at just 1.05 p.c. in 2005, a decline of around 0.30 percentage point compared to the 1998 level.

True, the subsidies granted by the regions and communities for worker training have increased during the last years, particularly since the introduction of the training vouchers and the extension of their use, which would thus help to reduce the training costs incurred by firms. However, the decline in the financial effort of firms has

TABLE 7 FORMAL TRAINING

	Training firms	Training cost		Training time		Workers in training
	(as p.c. of total firms)	(as p.c. of staff costs)	(average per hour, in euro)	(as p.c. of total hours worked)	(average per trainee, in hour)	(as p.c. of average employment)
Total population						
1998	7.5	1.34	44.5	0.75	33.1	33.0
1999	7.8	1.30	44.4	0.74	31.2	34.6
2000	7.6	1.42	43.0	0.86	35.3	35.1
2001	7.1	1.35	44.1	0.84	33.4	35.4
2002	7.2	1.26	46.1	0.78	31.3	35.0
2003	7.1	1.19	45.2	0.77	30.6	35.0
2004	6.9	1.13	46.5	0.73	28.3	35.9
Reduced population						
2004	8.6	1.27	48.1	0.81	29.1	39.4
2005	8.8	1.18	46.2	0.81	28.5	39.6
p.m. Percentage changes	*2.0*	*–6.8*	*–3.9*	*0.4*	*–2.0*	*0.6*

Source: NBB (social balance sheets).

coincided with a reduction in the proportion of working hours devoted to training, down from 0.86 to 0.73 p.c. between 2000 and 2005.

Only the proportion of trainees has remained steady at the level of five years ago. The number of employees given access to training increased from 522,000 in 1998 to around 600,000 in 2000 and 645,000 in 2004. The rise outpaced the growth of employment, so that the participation rate increased from 33 p.c. in 1998 to 35.1 p.c. in 2000 and 35.9 p.c. in 2004. In the reduced population, this proportion showed a further very slight rise of 0.6 p.c. between 2004 and 2005.

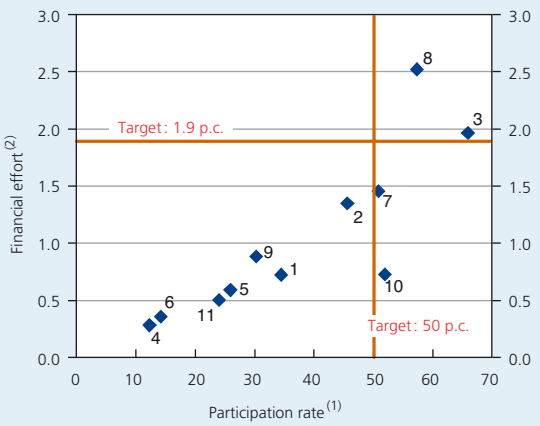
The overall target of training 50 p.c. of workers each year, set for 2010, is nevertheless still a long way off. For some branches of activity, however, it has already been achieved. That was the case, for example, in 2005, in the energy and water branch (66 p.c.), in financial and insurance services (57 p.c.), in health and social work (52 p.c.) and in transport and communication (51 p.c.). Conversely, other branches fell far short of this target, such as construction and the hotel and restaurant branch (less than 15 p.c.), and likewise trade and community, social and personal services (around 25 p.c.).

Among the branches of activity with a participation rate close to or over 50 p.c., only two also fulfilled the financial target in 2005. In financial and insurance services, and in energy and water, investment in training represented 2.5 and 2 p.c. respectively of staff costs. The other branches fall well short of the 1.9 p.c. target. Performance ranges from barely 0.3 and 0.4 p.c. in construction and the hotel and restaurant branch, to 1.3 and 1.5 p.c. in manufacturing industry and transport and communication.

The relative position of the various branches of activity in terms of these two targets is very important in the context of the Generation Pact, which specifies that training efforts will be assessed annually. As soon as the new social balance sheet form will be introduced, the National Labour Council will examine each year whether the training target has been met (that target is currently 1.9 p.c. but may be revised annually in the future). If it has not, the effort made by the sectors will be assessed and sanctions will be applied if appropriate: an increased contribution in favour of training leave will be imposed in the branches of activity whose performance is unsatisfactory. The biennial social consultation will consequently have to make provision, at sectoral level, for stepping up the training effort, either in terms of the participation rate or in financial terms. The social partners may choose from various solutions, such as the granting of a fixed amount of training time per worker, individually or collectively, and the adjustment of contributions to a sectoral fund. Checks will be conducted per sector.

CHART 12 SITUATION OF BRANCHES OF ACTIVITY IN RELATION TO TRAINING TARGETS IN 2005

(Percentages, reduced population)



1. Mining and quarrying industry
2. Manufacturing industry
3. Energy and water
4. Construction
5. Trade and repairs
6. Hotels and restaurants
7. Transport and communication
8. Financial and insurance services
9. Real estate and business services
10. Health and social work
11. Community, social and personal services

Source: NBB (social balance sheets).
(1) Workers given access to training, as a percentage of the total workforce.
(2) Training costs, as a percentage of staff costs.

5.2 Mentoring

The section of the social balance sheet relating to training, guidance and mentoring activities, in existence since 2002, records the number of persons over the age of 50 years receiving allowances for having halved their working hours and spending the time thus made available on the training of new workers in their firm or branch of activity.

There are very few firms supplying this information. In 2002 they numbered 328, or barely 0.5 p.c. of the total; the number then declined from 388 in 2003 to 381 in 2004. In the reduced population, the figures were 297 in 2004 and 310 in 2005.

In 2002, 5,631 training officers were recorded. This number increased to 7,702 in 2003, then dropped to 7,626 in 2004. The number of workers trained increased from 26,035 to 30,908 between 2002 and 2003, before dropping to 29,345 in 2004, or 1.6 p.c. of the total workforce.

According to the information obtained from the reduced population, the number of mentors and the numbers receiving mentoring increased significantly between 2004 and 2005, as did the volume of hours spent on these activities. The number of trainers increased from 6,598 to 6,896, a 4.5 p.c. rise. On average, these people spent almost 78 hours on these activities in 2005, compared to 73 hours a year earlier. The numbers of trainees increased by over 30 p.c. from 24,745 to 32,476 persons, representing 2.3 p.c. of the total workforce in 2005.

5.3 Training in the new social balance sheet form

The new social balance sheet form which will come into use shortly requires firms to supply a range of information on vocational training and initial training in enterprises.

Vocational training is intended to extend the knowledge and improve the skills of the firm's workers. It comprises the formal training defined above and informal training, covering other apprenticeship activities directly connected with job, organised according to the internal needs and requirements of the trainee's organisation. This includes, for example, workplace training, on-the-job training and job rotation, plus attendance at conferences and seminars, and private study. These activities are all ways of improving the workers' skills without recourse to formal training officers. However, they still generate costs for the employer, since – in the short term – the working time spent on these activities is lost to production. These costs, which are probably proportionately higher in certain firms, will in future be recorded in the social balance sheets in a special table relating to informal training. Here, firms will have to state the number of workers taking part in these activities, the working hours devoted to them and the costs incurred by the firm. The data will be broken down by sex. Conversely, the table concerning mentoring will be dropped.

Firms will also be required to fill in a similar table for initial training given to persons employed under schemes offering alternate periods of training and work experience, with the aim of gaining an official qualification or certificate.

These additions to the social balance sheet are connected with the assessment of firms' training policies, a task entrusted jointly to the National Labour Council and the Central Council of Economy at the October 2003 Employment Conference. For the purpose of performing that task, a "score board" with various training indicators obtained mainly from the social balance sheet and the labour force survey had been adopted. An updated version of this score board is included in the technical report of the Central Council of Economy published in November 2006.

Conclusion

This study has set out the provisional results taken from the social balance sheets for the year 2005. Since not all the social balance sheets were available in September 2006, it is based on a reduced population of 48,976 firms which filed their social balance sheet with the Central Balance Sheet Office before 25 September 2006.

In this reduced population, constructed according to the constant sample principle, employment grew by an average of 0.5 p.c. between 2004 and 2005. The movement in employment observed between 31 December 2004 and 2005 was of the same order of magnitude, but the rate of increase in the volume of labour expressed in FTEs declined during the year. A similar slowing down was seen for net recruitment during 2005, which fell by half against the previous year.

In small and medium-sized firms, employment expanded. In contrast, staff cuts were recorded in large firms. The workforce contracted further in industry. Employment remained stable overall in the trade, transport and communication branch. In the other branches it increased. There was a particularly marked rise in the other services branch, which include firms in the health and social work sector: these have recorded net job creation (including low skilled jobs) for a number of years. There was also sustained employment growth in construction.

In firms filing full-format accounts, there was an increase in the number of workers with higher education qualifications, while the number of workers with low or average skills declined. However, the latter still make up the bulk of the workers recruited. Examination of this recruitment shows that the workers taken on part time have a lower standard of education, on average, than full-time workers recruited, for whom there is a marked difference of profile according to sex: men are on average less skilled than female recruits. Taking firms as a whole, the female workforce grew by around 8,400 units during

2005, to represent 37.7 p.c. of total employment as at 31 December, while the number of men employed declined by around 1,400 units.

While net staff recruitment concerns proportionately greater numbers of full-time workers, changes in working arrangements for existing staff in favour of a part-time job contributed to the (almost 4 p.c.) rise in the percentage of part-time working in almost all branches of activity. The growth was more marked for men (6.2 p.c.) than for women (2.2 p.c.). This is partly due to the development of the time credit, which is increasingly used to achieve a better balance between work and family life, but also to ease the transition from working to retirement, particularly in large firms.

In the case of firms filing full-format accounts, changes to the contract of employment have also affected existing staff, with some temporary workers being offered permanent contracts. Despite the large net recruitment of temporary workers, the size of the temporary workforce actually varies very little, representing around 6 p.c. of total employment for the past three years. Staff turnover is in fact high in the case of temporary workers. However, it is also significant for staff on permanent contracts, since 12.8 p.c. of them left their employer in 2005.

The full-format social balance sheets can be used to assess the relative importance of the various types of flexible contracts, including agency work (3.3 p.c. of FTE employment in the reduced population in 2005) and staff on secondment (1.1 p.c.). Altogether, 9.2 p.c. of workers in these companies are employed under temporary contracts. The profile of these workers varies considerably by size of firm and branch of activity. Thus, small organisations favour agency workers, and large firms prefer fixed-term contracts. Both industry and construction use mainly agency workers, though the proportions are very different. The service branches make more use of fixed-term contracts. Staff on secondment and substitution contracts are found mainly in the various service branches.

The wage bill increased by 2.3 p.c. between 2004 and 2005 in firms in the reduced population. Since the volume of labour declined by 1.3 p.c., hourly costs increased by an average of 3.6 p.c. Hourly labour costs vary considerably between branches. Wage dispersion is also uneven: the ratio between the average costs recorded in firms with the highest hourly costs and the average calculated for those with the lowest hourly costs varies from about 2 in construction and the hotel and restaurant branch to 3.9 in community, social and personal services, and in real estate and business services, actually reaching up to 5 in the energy and water branch.

Finally, in regard to training, the performance observed is still well below the targets set. The indicator of the financial effort devoted to training declined once again in 2005, by almost 7 p.c. If this percentage were applied to the level attained in 2004 for all firms, the training budget would represent only 1.05 p.c. of staff costs in 2005, against 1.42 p.c. in 2000. However, there was a further small increase in the training participation rate of workers between 2004 and 2005. Thus, it is estimated that 36 p.c. of workers had access to training in 2005, one percentage point more than at the start of the decade. In line with previous agreements, the Generation Pact adopted at the end of December 2005 stipulates that the first indicator should reach 1.9 p.c. in 2006 and the second 50 p.c. by 2010. The Pact stresses the need to define sectoral plans, failing which compensatory measures will be introduced.

Annex 1

Methodology for composing the populations of firms for the financial years 1998 to 2005 and characteristics of the reduced population used for the 2005 analysis

The populations of firms used to calculate the results set out in the tables and charts of this article consist of companies whose social balance sheets have passed certain tests concerning homogeneity, consistency and quality. The methodological principles which determine whether or not the firms are included in the population are the same for the years for which the accounts have been finalised (namely 1998 to 2004) and for the 2005 financial year for which an early closing date of 25 September 2006 was set.

1. Methodology for composing the populations of firms used for analysis

The use of the strict methodological principles defined in points 1.1 to 1.4 below for composing the basic populations inevitably reduces the number of firms included in the analysis, compared to the population of firms filing a social balance sheet for each of the years in question, as recorded in the aggregate data published by the Central Balance Sheet Office.

In addition, the classification of firms by branch of activity used in this article differs from that used by the Central Balance Sheet Office because the activity code in the business register[1] developed on the basis of the DBRIS databank was systematically preferred to the code allocated by the Central Balance Sheet Office. However, the resulting reclassifications only concerned a few firms.

Despite the exclusion of a number of firms, necessary in order to ensure that the historical data were reliable and consistent, the populations used for the years 1998 to 2004 are still amply representative of the total, as regards both the number of firms and the number of workers. The results obtained for those years may be regarded as representative for the entire employed population. However, there is a possibility that the aggregate data may be distorted by one-off events or by legal changes in some major companies. Those anomalies have not been corrected.

1.1 Duration and closing date of the financial year

In order to ensure the internal consistency of the social balance sheets and the uniformity of the period covered by the analysis, firms were only considered if they ended a 12-month financial year on 31 December.

1.2 Exclusion of some categories of firms or activities

The analysis takes no account of firms which – according to the national accounts – belong to the public sector and which mainly come under the branches L "General government" (mainly health insurance funds in the social balance sheet) and M "Education", in order to keep as close as possible to the private sector concept in which firms behave in a more uniform way. In contrast, public enterprises[2], such as the Post Office and the BNRC, are included in the reference population in the branches where they pursue their activities.

(1) The 2004 edition of the business register (containing a set of administrative information concerning the firms active during a particular year) was taken as the reference source for determining the branch of activity of firms for all years 1998 to 2005. The firms which do not appear in this register keep the activity code allocated by the Central Balance Sheet Office.

(2) The use of the 2004 business register as the reference for the whole period 1998-2005 implies the exclusion, from the basic populations, of the public transport operators "de Lijn", "TEC" and "STIB", which come under the public sector, in contrast to earlier publications where these firms were allocated to the private sector.

Private sector firms in the NACE-Bel division 80 "Education", and firms which do not pursue any visible activity or whose activities are not clearly defined and the extraterritorial organisations belonging to the private sector are also disregarded. Temporary employment agencies are also omitted in view of the specific character of this sector and the difficulty of identifying anomalies in their social balance sheets.

Finally, firms employing less than one FTE were left out of the analysis owing to the numerous errors in their social balance sheets.

1.3 Consistency between annual accounts and social balance sheets

To allow comparison between the annual accounts and the social balance sheet of firms obliged to file both these documents, the analysis only takes firms into account if those documents relate to the same population of employees, which means that firms where some of their employees work abroad or are not recorded in the staff register (statutory personnel) are excluded. In practice, this means that the items recording the workers employed, namely 1003 in the social balance sheet and 9087 in the annual accounts, have to tally. However, a small difference, less than 0.5 FTE, is tolerated.

1.4 Critical thresholds for some ratios

A large number of firms submit abnormal values for one financial year or another in respect of labour costs per hour or number of hours worked per FTE. Critical values have therefore been set for those ratios. In some cases, the thresholds have been made flexible to take account of situations specific to certain branches of activity. Firms which, for any given year, submit results with ratios outside those critical values are removed from the population for that year. On the basis of that criterion, a firm can therefore be excluded from the total population for one year but included for other years.

1.5 Adjustments to the items concerning training and temporary agency employment

The social balance sheet is a key instrument for measuring the training efforts made by firms; those efforts are regarded as essential both by the social partners and by the Belgian and European authorities. However, year after year, substantial and sometimes actually recurrent anomalies are found in the items relating to training (number of workers trained, hours of training and training costs). To eliminate those errors and still keep the social balance sheets as a whole for the firms for which the anomalies are found, the items relating to training are recorded as zero for those firms while the rest of the social balance sheet is kept intact. Two ratios are used to detect anomalies: the number of hours of training per trainee must not exceed 15 p.c. of the annual number of hours worked per FTE, while the average hourly training costs must not be more than five times higher than the average labour costs per hour. Conversely, no adjustments are made at all to the new items relating to mentoring introduced since the 2002 financial year.

The report on the use of agency workers by firms filing full-format accounts also contains anomalies in terms of average hourly costs or average working hours. The items relating to agency workers were also recorded as zero if anomalies were found, while the rest of the social balance sheet was left unchanged.

1.6 Composition of a constant reduced population for the 2004-2005 analysis

Developments between 2004 and 2005 are measured on the basis of a constant, reduced population. The reason for using a reduced population is the smaller number of firms which can be taken into account in the analysis at the time of the early closure. The use of a constant population is also necessary to measure the changes in certain variables. Comparison of the results obtained on the basis of a reduced population with those based on a total population could introduce a bias and distort the conclusions of the analysis. Consequently, the results presented in this article reflect the developments observed in a stable population and may differ from the picture that emerges after the final closure for the full population. The method adopted implies the loss of the information concerning firms which have not submitted

a social balance sheet, either in 2004 (recently established firms or firms taking on their first employee) or in 2005 (social balance sheet filed or processed too late, bankruptcy, merger, takeover, de-merger). Since the Central Balance Sheet Office gives priority to processing the annual accounts of large firms, the results based on the reduced population for 2005 lead to some distortion in favour of the large firms.

For the analysis of the 2005 results, the reduced population consists of the companies which, on 25 September 2006, had filed a social balance sheet for both 2004 and 2005, and which also satisfied the quality criteria applicable to all firms (see 1.1 to 1.5). Any firms affected by legal changes (merger, takeover, de-merger) were disregarded if they displayed inconsistencies in the staff movements recorded, or if abnormal changes were detected in regard to average labour costs per hour or average annual working hours, indicating incorrect recording of the implications of these legal changes.

At the end of the selection procedure, the reduced population consisted of 48,976 firms which together employed 1,441,506 workers in the year 2005 (see table 2 in annex 1). For some of these firms, the data concerning training and temporary work were implausible. If the errors could not be corrected in time by contacting the firms, and if these firms represented a considerable share of their branch of activity, all of the items relating to training and/or temporary work were recorded as zero, so as not to distort the developments observed in these branches.

The populations of firms for the financial years 1998 to 2004 have a different status from those for 2005. The tables in Annexes 3 to 9 therefore contain data in terms of levels for the years 1998 to 2004. The results for 2005 are shown mainly as percentage changes and reflect developments observed in the firms in the reduced population between 2004 and 2005. In some cases, however, the level data for the reduced population are stated for the years 2004 and 2005, to draw attention to any differences between the results obtained for the total population and those for the reduced population.

2. Characteristics of the reduced population used to analyse the social balance sheets for the financial year 2005

2.1 Representativeness [1]

In 2004, the employees recorded in the staff register of firms included in the reduced population represented 54.5 p.c. of private sector employment as recorded in the national accounts [2] and 79.6 p.c. of employees in all firms filing a social balance sheet for the year under review, although the number of firms included in the reduced population represents only 64.1 p.c. of the total population of firms.

Representativeness according to the employment criterion varies from one branch of activity to another. Expressed as a percentage of the total number of workers employed in the firms of the total population for 2004, the representativeness is lowest in the branches dominated by small firms, whose annual accounts are filed and/or processed later. That applies to agriculture, for instance, and the hotel and restaurant branch. These are also the branches with the largest number of unincorporated self-employed persons (who are consequently exempt from submitting a social balance sheet, even if they employ paid staff). Therefore, in terms of the percentage of employment recorded in the national accounts, these branches are decidedly unrepresentative.

(1) The representativeness of the reduced population is calculated with regard to both the national accounts (private sector) and the total population of firms. It therefore relates to the 2004 financial year, the last year for which the total population of firms having filed a social balance sheet is available.

(2) The concept of paid employment in the private sector used here corresponds to employment in the total economy (S1) less employment in the public sector (S13). That concept also omits workers employed in the branches L "General government", M "Education" and P "Domestic services", who are not taken into account in full in the social balance sheets.

TABLE 1 REPRESENTATIVENESS OF THE REDUCED POPULATION IN 2004

	Number of employees			Representativeness of the reduced population	
	In the private sector of the national accounts [1]	In the social balance sheet of firms in the total population [2]	In the social balance sheet of firms in the reduced population [2]	In p.c. of private sector employment	In p.c. of the total population
	(1)	(2)	(3)	(4) = (3) / (1)	(5) = (3) / (2)
According to the employment criterion					
Agriculture	26,338	9,844	6,034	22.9	61.3
Industry	609,911	472,437	416,821	68.3	88.2
Mining and quarrying industry	3,099	2,980	2,650	85.5	88.9
Manufacturing industry	582,168	447,087	392,105	67.4	87.7
Energy and water	24,644	22,370	22,066	89.5	98.6
Construction	188,493	133,057	103,215	54.8	77.6
Trade, transport and communication	806,469	565,435	455,297	56.5	80.5
Trade and repairs	469,503	303,890	242,816	51.7	79.9
Horeca	101,435	56,073	30,154	29.7	53.8
Transport and communication	235,531	205,472	182,328	77.4	88.7
Financial, real estate and business services	514,494	292,761	241,138	46.9	82.4
Financial and insurance services	127,500	115,335	103,826	81.4	90.0
Real estate and business services	386,994	177,427	137,311	35.5	77.4
Other services	484,965	326,966	211,187	43.5	64.6
Health and social work	384,449	288,003	183,581	47.8	63.7
Community, social and personal services	100,516	38,963	27,606	27.5	70.9
Total	**2,630,670**	**1,800,501**	**1,433,692**	**54.5**	**79.6**
According to the criterion concerning the number of firms	n.	**76,417**	**48,976**	n.	**64.1**

Sources: NAI, NBB (social balance sheets).

(1) The concept of paid employment in the private sector used here corresponds to employment in the total economy (S1) less employment in the public sector (S13). Moreover, this concept excludes employees in the branches L "General government", M "Education" and P "Domestic services", who are not taken into account in full in the social balance sheets.

(2) Item 1001 + item 1002.

2.2 Characteristics of the reduced population in 2005

Of the 48,976 firms in the population used to analyse the situation in 2005, 938 firms, mainly belonging to the health and social work branch and to financial and insurance services, together employing around 270,000 workers, had filed a separate social balance sheet. Also, there were 39,952 firms which had submitted short-format accounts and employed 310,462 workers; this corresponded to an average of 7.8 employees per firm, compared to an average of 125.3 employees in the 9,024 firms filing full-format accounts. The firms which submitted accounts in the full format therefore represent 18.4 p.c. of the total number of social balance sheets and 78.5 p.c. of the total number of workers employed in firms in the reduced population.

For the purposes of the analysis, the firms filing a social balance sheet were classified by branch of activity and by size.

Manufacturing industry employs 26.9 p.c. of workers in the reduced population. The branches trade and repairs, health and social work, and transport and communication respectively account for 17, 13.2 and 12.5 p.c. of that workforce. The branches real estate and business services, construction, and financial and insurance services employ 9.9, 7.3 and 7.1 p.c. of workers respectively. The other branches are of rather minor importance; they each represent under 2 p.c. of the workers taken into account in this study.

TABLE 2 CHARACTERISTICS OF THE REDUCED POPULATION IN 2005

	Number of firms		Number of employees[1] (annual average)	
	Units	In p.c. of the total	Units	In p.c. of the total
Firms filing a social balance sheet having met the selection criteria	**48,976**	**100.0**	**1,441,506**	**100.0**
of which:				
Firms filing a separate social balance sheet	938	1.9	270,487	18.8
Firms filing a social balance sheet as an annex to the annual accounts	48,038	98.1	1,171,020	81.2
of which:				
Firms filing short-format accounts	39,952	81.6	310,462	21.5
Firms filing full-format accounts	9,024	18.4	1,131,045	78.5
Breakdown of firms by branch of activity				
Agriculture	785	1.6	5,973	0.4
Industry	7,656	15.6	412,150	28.6
Mining and quarrying industry	76	0.2	2,621	0.2
Manufacturing industry	7,533	15.4	387,694	26.9
Energy and water	47	0.1	21,836	1.5
Construction	7,330	15.0	105,308	7.3
Trade, transport and communication	20,707	42.3	455,439	31.6
Trade and repairs	15,159	31.0	245,595	17.0
Horeca	2,398	4.9	30,138	2.1
Transport and communication	3,150	6.4	179,706	12.5
Financial, real estate and business services	9,515	19.4	244,152	16.9
Financial and insurance services	1,805	3.7	101,811	7.1
Real estate and business services	7,710	15.7	142,342	9.9
Other services	2,983	6.1	218,484	15.2
Health and social work	1,525	3.1	190,262	13.2
Community, social and personal services	1,458	3.0	28,221	2.0
Breakdown by size of firms[2]				
Small firms (no more than 50 FTEs)	45,664	93.2	419,750	29.1
Medium-sized firms (more than 50 to 250 FTEs)	2,674	5.5	299,735	20.8
Large firms (more than 250 FTEs)	638	1.3	722,022	50.1

Source: NBB (social balance sheets).
(1) Item 1001 + item 1002.
(2) Determined on the basis of the number of FTEs (item 1003) in 2004.

The classification of the firms by size is based on the average number of workers expressed in FTEs[1] recorded in 2004. Small firms with no more than 50 FTEs, i.e. 93.2 p.c. of the total, accounted for around 30 p.c. of the workforce in the reduced population in 2005, or an average of 9.2 workers per firm, while medium-sized firms employing 50 to 250 FTEs represented 2,674 firms and some 300,000 workers, which is 21 p.c. of the total. There were 638 large firms, i.e. those with over 250 FTEs, which employed around 722,000 persons in 2005, which represents an average of 1,132 workers per firm and more than half of the total number of workers employed in the firms considered.

(1) Item 1003 of the social balance sheet.

Annex 2

LIST OF SECTIONS AND DIVISIONS FROM THE NACE-BEL NOMENCLATURE OF ACTIVITIES USED FOR THE ANALYSIS

Title	Section	Division
Agriculture	A–B	01-05
Industry		
Mining and quarrying industry	C	10-14
Manufacturing industry	D	15-37
Energy and water	E	40-41
Construction	F	45
Trade, transport and communication		
Trade and repairs	G	50-52
Horeca	H	55
Transport and communication	I	60-64
Financial, real estate and business services		
Financial and insurance activities	J	65-67
Real estate and business services[1]	K	70-74
Other services		
Health and social work	N	85
Community, social and personal services	O	90-93

(1) Excluding temporary employment agencies (code NACE-Bel 74,502).

Annex 3

CHANGE, BETWEEN 2004 AND 2005, IN THE NUMBER OF WORKERS RECORDED IN THE STAFF REGISTER IN FIRMS IN THE REDUCED POPULATION

	In full-time equivalents			In persons						
	Average employment		Employment at the end of the exercise	Average employment						Employment at the end of the exercise
				Full-time		Part-time		Total		
	(units)	(p.c.)	(p.c.)	(units)	(p.c.)	(units)	(p.c.)	(units)	(p.c.)	(p.c.)
Agriculture	36	0.7	–1.7	12	0.3	–73	–4.1	–61	–1.0	–2.0
Industry	–5,421	–1.3	–1.2	–6,891	–1.8	2,220	5.3	–4,671	–1.1	–1.0
Mining and quarrying industry	–31	–1.2	–1.5	–54	–2.1	25	20.0	–29	–1.1	–1.5
Manufacturing industry	–5,058	–1.3	–1.3	–6,484	–1.8	2,073	5.1	–4,412	–1.1	–1.0
Energy and water	–332	–1.5	0.3	–353	–1.7	123	8.7	–231	–1.0	0.4
Construction	2,048	2.0	2.1	1,755	1.8	337	6.8	2,093	2.0	2.2
Trade, transport and communication	–1,627	–0.4	–0.6	–4,051	–1.2	4,193	3.6	142	0.0	–0.1
Trade and repairs	1,893	0.9	0.1	849	0.5	1,930	2.7	2,780	1.1	0.4
Horeca	–112	–0.5	–1.2	–70	–0.5	54	0.3	–16	–0.1	–0.7
Transport and communication	–3,408	–2.0	–1.5	–4,830	–3.2	2,208	7.5	–2,622	–1.4	–0.8
Financial, real estate and business services	1,895	0.9	0.7	–417	–0.2	3,431	5.5	3,014	1.3	1.5
Financial and insurance services	–2,623	–2.7	–2.3	–3,673	–4.6	1,658	6.7	–2,016	–1.9	–2.0
Real estate and business services	4,518	3.7	3.0	3,257	3.3	1,774	4.7	5,030	3.7	4.0
Other services	5,295	3.1	2.4	1,907	1.8	5,390	5.2	7,297	3.5	2.8
Health and social work	4,842	3.3	2.6	1,465	1.7	5,217	5.4	6,681	3.6	3.0
Community, social and personal services	453	1.9	0.8	443	2.2	173	2.3	616	2.2	1.1
Total	**2,227**	**0.2**	**0.0**	**–7,684**	**–0.7**	**15,498**	**4.7**	**7,814**	**0.5**	**0.5**

Source: NBB (social balance sheets).

Annex 4

HOURS WORKED BY WORKERS RECORDED IN THE STAFF REGISTER

	Units, per year (total population)									*Percentage changes between 2004 and 2005 (reduced population)*		
	1998	1999	2000	2001	2002	2003	2004					
	Per full-time equivalent						Per full-time equivalent	Per full-time worker	Per part-time worker	*Per full-time equivalent*	*Per full-time worker*	*Per part-time worker*
Agriculture	1,552	1,572	1,573	1,537	1,545	1,533	1,556	1,545	753	*–1.8*	*–1.4*	*2.8*
Industry	1,546	1,537	1,534	1,518	1,506	1,508	1,533	1,534	990	*–1.2*	*–1.1*	*–0.9*
Mining and quarrying industry	1,490	1,516	1,517	1,479	1,487	1,497	1,490	1,490	887	*–1.9*	*–1.9*	*5.3*
Manufacturing industry	1,549	1,539	1,540	1,523	1,510	1,512	1,539	1,541	989	*–1.4*	*–1.3*	*–0.9*
Energy and water	1,498	1,501	1,417	1,415	1,427	1,426	1,411	1,413	1,053	*2.5*	*2.3*	*–1.1*
Construction	1,430	1,469	1,461	1,439	1,428	1,432	1,465	1,461	899	*–2.0*	*–2.1*	*2.5*
Trade, transport and communication	1,713	1,711	1,677	1,640	1,626	1,616	1,605	1,606	899	*–1.9*	*–1.9*	*–2.1*
Trade and repairs	1,660	1,650	1,634	1,627	1,609	1,600	1,608	1,614	949	*–0.7*	*–0.9*	*0.0*
Horeca	1,634	1,621	1,624	1,580	1,590	1,567	1,562	1,535	635	*–0.3*	*–0.3*	*–1.3*
Transport and communication	1,811	1,827	1,739	1,666	1,656	1,648	1,608	1,604	1,033	*–3.6*	*–3.1*	*–7.3*
Financial, real estate and business services	1,628	1,613	1,601	1,588	1,552	1,541	1,551	1,568	870	*–0.9*	*–0.7*	*–1.1*
Financial and insurance services	1,573	1,534	1,529	1,501	1,428	1,426	1,436	1,465	876	*–1.2*	*–0.3*	*–5.1*
Real estate and business services	1,677	1,676	1,657	1,654	1,646	1,625	1,630	1,641	867	*–1.1*	*–1.4*	*1.4*
Other services	1,568	1,560	1,555	1,537	1,530	1,537	1,532	1,519	935	*–1.2*	*–1.4*	*–0.7*
Health and social work	1,564	1,555	1,549	1,530	1,524	1,530	1,525	1,507	944	*–1.4*	*–1.6*	*–0.8*
Community, social and personal services	1,598	1,600	1,595	1,583	1,581	1,594	1,583	1,580	828	*0.2*	*–0.2*	*0.3*
Total	**1,598**	**1,595**	**1,584**	**1,562**	**1,547**	**1,545**	**1,552**	**1,552**	**916**	***–1.4***	***–1.4***	***–1.2***

Source: NBB (social balance sheets).

Annex 5

BREAKDOWN OF WORKERS RECORDED IN THE STAFF REGISTER BY TYPE OF CONTRACT AND BY GENDER

(Percentages of total, data as at 31 December)

	1998	1999	2000	2001	2002	2003	2004	*2004*	*2005*
	(total population)							*(reduced population)*	
By type of contract									
Permanent contract	93.1	92.9	93.1	93.5	93.8	93.9	93.9	*94.6*	*94.6*
Fixed-term contract	5.2	5.5	5.4	4.9	4.9	5.0	5.0	*4.4*	*4.5*
Agriculture	6.3	8.8	7.5	7.5	5.2	6.1	6.2	*5.2*	*5.2*
Industry	4.7	4.6	5.2	4.2	3.9	3.6	3.8	*3.8*	*3.8*
Mining and quarrying industry	3.4	4.5	6.1	5.6	5.8	6.0	6.1	*6.4*	*7.0*
Manufacturing industry	4.6	4.5	5.1	4.0	3.7	3.4	3.7	*3.7*	*3.7*
Energy and water	8.4	8.7	8.0	7.4	6.2	6.3	6.0	*6.0*	*6.3*
Construction	3.0	3.2	3.1	2.1	2.7	2.7	2.7	*2.3*	*2.3*
Trade, transport and communication	5.0	5.2	4.6	4.7	5.2	5.7	5.5	*5.0*	*5.1*
Trade and repairs	4.4	4.7	5.1	5.6	5.6	6.0	5.7	*5.6*	*5.7*
Horeca	7.2	8.1	9.9	8.9	9.7	11.4	12.6	*10.6*	*10.5*
Transport and communication	5.3	5.0	2.8	2.5	3.7	3.7	3.2	*3.2*	*3.3*
Financial, real estate and business services	4.5	5.0	4.7	4.1	4.1	4.2	4.0	*2.8*	*3.0*
Financial and insurance services	4.3	4.9	4.8	4.4	3.5	2.9	3.0	*3.0*	*2.8*
Real estate and business services	4.6	5.0	4.6	3.9	4.4	5.0	4.7	*2.6*	*3.1*
Other services	8.2	8.9	8.5	8.3	7.6	7.6	7.7	*7.4*	*7.4*
Health and social work	8.3	8.9	8.5	8.2	7.5	7.4	7.6	*7.3*	*7.3*
Community, social and personal services	7.1	8.4	8.9	8.8	8.8	8.6	7.9	*7.7*	*8.0*
Substitution contract	1.4	1.4	1.3	1.3	1.1	1.0	0.9	*0.8*	*0.8*
Contract for a specific project	0.3	0.2	0.2	0.3	0.2	0.2	0.2	*0.1*	*0.1*
By gender									
Male	62.6	62.1	62.9	61.7	61.0	60.7	60.6	*62.7*	*62.3*
Female	37.4	37.9	37.1	38.3	39.0	39.3	39.4	*37.3*	*37.7*

Source: NBB (social balance sheets).

Annex 6

BREAKDOWN OF EMPLOYMENT BY STATUS OF WORKERS IN FIRMS FILING FULL-FORMAT ACCOUNTS

(Percentages of average FTE employment)

	1998	1999	2000	2001	2002	2003	2004	*2004*	*2005*
	(total population)							*(reduced population)*	
Workers recorded in the staff register	96.3	96.5	96.2	96.5	96.6	96.4	95.8	*95.7*	*95.6*
Temporary agency workers	2.7	2.8	3.0	2.7	2.6	2.7	3.1	*3.1*	*3.3*
Agriculture	2.9	3.3	2.9	3.6	5.4	5.4	6.7	*6.8*	*4.4*
Industry	4.3	4.2	4.8	4.2	4.1	4.4	4.9	*4.8*	*4.8*
Mining and quarrying industry	2.9	2.9	4.1	3.3	3.7	3.1	2.4	*2.2*	*2.4*
Manufacturing industry	4.5	4.4	5.0	4.4	4.3	4.5	5.2	*5.1*	*5.1*
Energy and water	0.7	0.8	1.2	0.9	0.9	1.1	0.9	*0.9*	*1.1*
Construction	1.3	1.5	1.5	1.5	1.2	1.2	1.2	*1.1*	*1.6*
Trade, transport and communication	2.8	2.8	2.9	2.8	2.7	2.9	3.4	*3.3*	*3.7*
Trade and repairs	3.4	3.2	3.7	3.5	3.4	3.5	3.9	*3.8*	*4.0*
Horeca	3.8	4.3	6.1	5.0	4.7	4.0	4.0	*3.8*	*4.2*
Transport and communication	2.1	2.2	1.9	1.9	2.0	2.2	2.8	*2.7*	*3.3*
Financial, real estate and business services	1.6	1.9	2.0	2.0	1.8	1.7	2.0	*1.8*	*1.9*
Financial and insurance services	0.8	1.1	1.2	1.2	0.8	0.7	0.6	*0.6*	*0.6*
Real estate and business services	2.5	2.7	2.9	2.8	2.7	2.7	3.2	*3.1*	*3.1*
Other services	0.7	0.9	1.1	0.8	0.8	0.9	1.0	*1.0*	*1.0*
Health and social work	0.4	0.4	0.6	0.4	0.4	0.5	0.5	*0.4*	*0.5*
Community, social and personal services	4.5	5.7	5.3	5.1	5.2	5.1	5.2	*5.4*	*5.4*
Workers on secondment[1]	0.9	0.8	0.7	0.7	0.8	0.9	1.1	*1.1*	*1.1*

Source: NBB (social balance sheets).

(1) Workers recorded in a firm's staff register and seconded to another firm which is obliged to file a social balance sheet are counted twice.

Annex 7

STAFF COSTS PER FTE [1]

	Euro, per year (total population)							*Percentage changes between 2004 and 2005 (reduced population)*
	1998	1999	2000	2001	2002	2003	2004	
Agriculture	25,296	26,353	26,649	27,005	28,417	28,745	29,775	*2.1*
Industry	43,041	44,128	44,986	46,479	48,704	49,692	51,578	*2.2*
Mining and quarrying industry	37,942	38,998	39,958	41,812	43,941	45,628	46,147	*1.2*
Manufacturing industry	41,514	42,704	43,841	45,302	47,298	48,631	50,276	*2.3*
Energy and water	79,864	77,809	70,491	74,014	77,452	74,704	77,728	*1.7*
Construction	31,321	32,954	33,658	34,685	35,824	36,684	37,864	*0.6*
Trade, transport and communication	35,557	36,808	37,439	38,765	40,447	41,212	42,360	*2.9*
Trade and repairs	37,195	37,791	38,282	39,716	41,000	41,502	42,375	*3.0*
Horeca	23,844	24,467	24,753	25,152	26,504	27,499	28,233	*1.7*
Transport and communication	35,162	37,798	38,419	39,754	42,002	43,215	44,942	*2.9*
Financial, real estate and business services	51,517	52,630	53,570	55,160	56,140	56,860	57,475	*1.8*
Financial and insurance services	59,136	61,530	62,447	63,909	64,258	65,611	67,245	*2.0*
Real estate and business services	44,786	45,454	46,637	48,584	49,925	50,512	50,728	*2.5*
Other services	33,091	33,366	33,890	35,213	37,138	38,705	39,355	*2.2*
Health and social work	33,258	33,455	33,994	35,322	37,148	38,766	39,452	*2.0*
Community, social and personal services	31,802	32,698	33,166	34,423	37,058	38,250	38,688	*3.3*
Total	**39,674**	**40,638**	**41,379**	**42,732**	**44,421**	**45,293**	**46,484**	***2.1***

Source: NBB (social balance sheets).
(1) Item 1023 / item 1003.

Annex 8

STAFF COSTS PER HOUR WORKED [1]

	Euro (total population)							*Percentage changes between 2004 and 2005 (reduced population)*
	1998	1999	2000	2001	2002	2003	2004	
Agriculture	16.30	16.76	16.94	17.57	18.40	18.75	19.13	*4.0*
Industry	27.84	28.71	29.32	30.62	32.34	32.95	33.65	*3.3*
Mining and quarrying industry	25.46	25.73	26.35	28.27	29.56	30.48	30.96	*3.2*
Manufacturing industry	26.81	27.75	28.47	29.75	31.32	32.17	32.66	*3.6*
Energy and water	53.30	51.83	49.76	52.30	54.28	52.40	55.09	*–0.7*
Construction	21.91	22.43	23.03	24.10	25.08	25.61	25.85	*2.6*
Trade, transport and communication	20.75	21.51	22.32	23.64	24.87	25.50	26.40	*4.8*
Trade and repairs	22.40	22.91	23.43	24.40	25.48	25.94	26.35	*3.7*
Horeca	14.59	15.10	15.24	15.91	16.67	17.55	18.08	*2.0*
Transport and communication	19.42	20.69	22.09	23.86	25.37	26.23	27.96	*6.8*
Financial, real estate and business services	31.64	32.63	33.46	34.73	36.18	36.89	37.06	*2.8*
Financial and insurance services	37.59	40.10	40.84	42.58	45.00	46.02	46.82	*3.3*
Real estate and business services	26.70	27.12	28.14	29.37	30.32	31.08	31.12	*3.7*
Other services	21.11	21.39	21.79	22.92	24.27	25.18	25.68	*3.4*
Health and social work	21.27	21.52	21.94	23.09	24.38	25.34	25.87	*3.5*
Community, social and personal services	19.90	20.44	20.79	21.74	23.44	24.00	24.44	*3.1*
Total	**24.82**	**25.48**	**26.12**	**27.36**	**28.71**	**29.31**	**29.94**	***3.6***

Source: NBB (social balance sheets).
(1) Item 1023 / item 1013.

Annex 9

VOCATIONAL TRAINING IN FIRMS INCLUDED IN THE REDUCED POPULATION IN 2005

	Number of trainees			Hours of training				Training costs		
	(in p.c. of employment as at 31 December)			(in p.c. of the number of hours worked)	(average per trainee, units)			(in p.c. of staff costs)	(average per trainee, in euro)		
	Total	Male	Female		Total	Male	Female		Total	Male	Female
Agriculture	2.4	2.4	3.0	0.06	31.7	27.4	39.7	0.10	1,115	1,171	1,009
Industry	46.6	48.5	40.9	1.02	32.0	33.1	27.3	1.39	1,548	1,601	1,316
Mining and quarrying industry	34.5	35.1	32.8	0.63	26.0	26.1	25.8	0.72	985	967	1,216
Manufacturing industry	45.6	47.6	39.9	1.00	32.0	33.1	27.5	1.35	1,487	1,534	1,284
Energy and water	65.8	67.1	59.6	1.49	31.9	33.5	25.2	1.97	2,327	2,471	1,715
Construction	12.3	12.4	10.2	0.21	24.8	24.9	23.0	0.28	882	879	925
Trade, transport and communication	35.0	37.4	31.2	0.74	29.8	32.5	24.4	0.96	1,092	1,281	714
Trade and repairs	25.9	27.5	23.9	0.44	23.8	25.7	21.2	0.59	895	1,024	724
Horeca	14.2	12.9	15.7	0.17	13.6	14.7	12.6	0.36	557	611	511
Transport and communication	50.8	49.6	56.7	1.22	34.7	36.6	29.2	1.46	1,255	1,438	722
Financial, real estate and business services	41.5	43.6	38.5	0.95	31.3	34.0	27.6	1.69	2,175	2,295	2,016
Financial and insurance services	57.3	60.8	53.9	1.31	29.5	30.6	28.2	2.52	2,775	2,902	2,625
Real estate and business services	30.2	32.5	26.5	0.71	33.7	38.2	26.7	0.89	1,359	1,560	1,050
Other services	48.3	37.5	51.7	0.72	18.0	19.9	17.6	0.70	467	580	440
Health and social work	51.9	40.8	54.6	0.78	17.8	19.4	17.5	0.73	446	527	430
Community, social and personal services	24.0	29.1	18.3	0.36	21.2	21.6	20.6	0.50	776	773	783
Total	**39.6**	**39.4**	**40.1**	**0.81**	**28.5**	**32.0**	**22.8**	**1.18**	**1,317**	**1,533**	**967**

Source: NBB (social balance sheets).

Summaries of articles

Economic projections for Belgium – Autumn 2006

Since the publication of the Bank's spring projections, the growth of activity in the euro area in the first half of 2006 has been stronger than previously predicted and oil prices, after rising further during the summer, have fallen to a level hovering around 60 dollars since October 2006.

In Belgium, economic activity recorded a considerable increase in vitality in late 2005 and early 2006, with quarterly GDP growth reaching 0.9 p.c. in the first quarter and 0.7 p.c. in the second quarter. The rate of GDP growth may have dipped slightly in the second half of the year, maintaining a sound course more in line with the potential for growth in the medium term. In all, real GDP growth is expected to increase from 1.5 p.c. in 2005 to 3 p.c. in 2006. The projected figure for 2007 is 2.1 p.c.

Apart from the robust support of foreign demand, the improvement in 2006 had its origins largely within the economy, in household expenditure on consumption and housing and in business investment. The same factors are expected to operate in 2007, although the effect will be more moderate.

Since the cyclical movements in activity are largely absorbed by productivity, the 1 p.c. rate of net job creation achieved in 2005 will probably be maintained for the ensuing two years. Altogether, around 43,000 net additional jobs will be created each year from 2005 to 2007. However, taking account of the rapid growth of the labour force since 2005, the harmonised unemployment rate will only fall slightly during the period covered by the forecasts, to average 8.3 p.c. in 2007 against 8.4 p.c. in 2005 and 8.5 p.c. in 2006.

Estimated on the basis of the HICP, total inflation – which had averaged 2.5 p.c. in 2005 – is predicted to fall to 2.3 p.c. in 2006 and 1.9 p.c. in 2007, as a result of the projected easing of energy prices. In contrast, the underlying trend in inflation is expected to maintain the gradual rise which began in mid 2005, increasing from 1.5 p.c. in 2005 to an average of 1.9 p.c. in 2007. For that year, the introduction on 1 July 2007 of the general packaging levy and the increase in excise duty on tobacco, included in the 2007 budget, will push inflation up by 0.2 point. Unit labour costs are projected to increase by 0.7 p.c. in 2006 and 1.2 p.c. in 2007, following an average annual increase of 0.5 p.c. in the two preceding years, these fluctuations reflecting the cyclical movements in productivity. Hourly labour costs should maintain their annual rate of increase of 2¼ p.c. in 2006 and 2007, comparable to that of the two preceding years.

Taking account of the latest information, public finances should end the year 2006 more or less in balance. For 2007, the forecasts indicate a deficit of 0.4 p.c. of GDP, despite a further decline in interest charges – although the fall is admittedly not as steep as in previous years – and the reduction in local authority investment expenditure which is normal in the year following the local elections. The adverse movement in the budget balance is due largely to the non-recurring measures taken into account in the estimate, the impact of which will be less than in 2006. In addition, public revenues are also expected to contract in relation to GDP, since labour incomes – which are taxed relatively heavily – are growing more slowly than GDP.

In 2006 and 2007 the public debt will continue to diminish steadily.

JEL Code: E17, E25, E37, E66

Key words: Belgium, macroeconomic projections, Eurosystem

The financial position of Belgian non-financial corporations

As entities where the production process takes place, non financial corporations deserve full attention in the analysis of the real and financial accounts. However, the examination of the financial behaviour of non financial corporations is traditionally confined to their financing: thus, the Bank's annual report generally only considers their liabilities.

Yet the formation of financial assets by non financial corporations is a significant item of information, in both statistical and economic terms. The total financial assets held by non financial corporations in Belgium are considerable, as they far exceed the total financial assets of households. A study recently revealed the historically high level of financial asset formation by non financial corporations in the main industrialised countries, a factor which could help to explain the relatively low level of long-term interest rates.

In recent years, Belgian non financial corporations have formed substantially more financial assets than their counterparts in the euro area. In 2005, the financial assets held by Belgian companies were – partly for that reason – almost double the financial assets, expressed in percentages of GDP, of non financial corporations in the euro area.

However, this situation certainly does not indicate any risk aversion on the part of Belgian non financial corporations. In fact the liabilities side of their balance sheets also records growth of new financial liabilities in excess of the figure for non financial corporations in the euro area, so that – in terms of liabilities, too – the outstanding total in Belgium is comparatively much higher than the outstanding total in the euro area.

This paradoxical situation of Belgian non financial corporations – the fact that they hold much more substantial assets while at the same time contracting significantly greater liabilities – is due to the fact that the Belgian non financial corporations sector includes coordination centres and non financial holding companies, i.e. undertakings acting, as it were, as financial intermediaries. If the coordination centres and non financial holding companies are excluded, the overall outstanding total gross assets and liabilities of Belgian non financial corporations reverts to a level very close to the figure for the euro area.

Finally, in 2005 Belgian non financial institutions recorded an outstanding total of net liabilities amounting to around 100 p.c. of GDP, i.e. slightly more than the outstanding total for non financial corporations in the euro area. It is also apparent that the exclusion of the coordination centres and non financial holding companies has hardly any effect on Belgium's net debtor position, confirming that these two types of institutions perform an intermediary function.

Although it is not possible to isolate the coordination centres and non financial holding companies in the case of new transactions (flows), there is no reason to think that the effect would be any different: there would be a significant decline in the gross flows of new assets and liabilities, but that would have a negligible influence on the financial balance. That balance is very similar to the one for the euro area.

JEL Codes: E50, G30

Key words: flow of funds, corporate finance

The social balance sheet 2005

Each year, the National Bank examines the provisional results of the social balance sheets of Belgian enterprises. As the social balance sheets are not yet all available for 2005, the study is based on a limited population of enterprises, compiled according to the principle of a constant sample. This population is made up of 48,976 enterprises employing around 4,441,000 workers in 2005. The main results of the analysis are as follows.

As an average, employment increased by 0.5 p.c. between 2004 and 2005. Although the year-end growth rate was also 0.5 p.c. for these two years, the rate of increase in the volume of labour expressed in full-time equivalent slowed down during the year. Net staff recruitment also declined during 2005, falling to only half the previous year's level.

In fact, employment expanded in small and medium-sized enterprises while large companies recorded staff cuts. In industry, the workforce contracted once again. It remained stable in trade, transport and communications whereas it increased in the other branches, especially in other services and construction. The female workforce grew by around 8,400 units between year-end 2004 and 2005, representing 37.7 p.c. of total employment at 31 December 2005; the number of male employees declined by around 1,400 units.

Net staff recruitment is proportionately greater for full-time workers. However, because of the changes in the working arrangements of existing staff, the rate of part-time working increased by almost 4 p.c. Part of this rise is due to the development of the time credit scheme, increasingly used to reconcile work and family life, but also to facilitate the transition between working life and retirement.

Enterprises filing full-format accounts supply more details on staff movements during the year. There has been an increase in the number of workers with higher education qualifications, while the number of staff with low and medium skills has declined. However the majority of the workers taken on still fall into these last categories of staff. New part-time employees have lower qualifications than those recruited as full-time staff. The male full-time workers recruited are on average less skilled than new female full-time workers. Despite the large net intake of temporary workers, the total for the latter varies only very slightly, since some of these workers are offered a permanent contract while other temporary jobs are subject to a high rate of turnover. However, the turnover of employees on permanent contracts is also quite significant, since 12.8 p.c. of them left their employer in 2005. Finally, the number of staff leaving declined between 2004 and 2005, mainly because of a reduction in the use of early retirement schemes and redundancies.

The full-format accounts also contain information on the use of agency workers and persons on secondment from an outside firm. It is therefore possible to assess the relative importance of all temporary contracts which, in these companies, altogether represent 9.2 p.c. of workers. Small organisations use more agency workers, while larger ones prefer fixed-term contracts. Manufacturing industry and the construction sector use primarily agency workers while the service branches make more use of fixed-term contracts. Persons on secondment and substitution contracts are found mainly in the service branches.

Hourly labour costs increased by an average of 3.6 p.c. between 2004 and 2005 in enterprises of the limited population. The article shows that, while the level of hourly labour costs differs significantly between branches, the dispersion of these costs is also considerable : the ratio between the average costs recorded in firms with the lowest costs and the average calculated for those with the highest costs varies by a factor of 2 to 5 between branches.

Finally, in regard to training, the financial effort indicator declined once again in 2005. The training budget is estimated to be 1.05 p.c. of staff costs in 2005, against 1.13 p.c. in 2004 and a peak of 1.42 p.c. in 2000. However, there was a slight increase in the rate of employees' participation in training : 36 p.c. of workers had access to training in 2005, one percentage point more than at the beginning of the decade. These performances still fall well short of the targets set by the inter-generation solidarity pact adopted at the end of December 2005, which – in line with earlier agreements – stipulates that the first indicator should reach 1.9 p.c. in 2006 and the second 50 p.c. by 2010.

JEL Code : J20, J24, J30, J31, M51, M53

Key words : employment, staff costs, training, working hours, employment contract, full-time, part-time, skills, temporary worker

Trend in the financial structure and results of firms in 2005

Each year, the National Bank examines the situation regarding the annual accounts of Belgian non-financial corporations. By that time, the Central Balance Sheet Office has already collected a representative number of annual accounts for the preceding year.

The article is in three parts. The first part describes the methodology used and the sample. The second part studies the main developments in the profit and loss account. Finally, the third part contains a financial analysis of Belgian companies ; this analysis is supplemented by the interpretation of the results of the failure prediction model developed by the Bank.

In 2005, the total value added created by Belgian non financial corporations increased by 4 p.c., constituting a slowdown in comparison with 2004. At the same time, the operating costs (mainly personnel costs and depreciation) grew by 2.8 p.c. So, for the third year in a row, value added growth greatly exceeded the rise in operating costs. As a result, the net operating profit increased by 8.4 p.c., after having already produced an exceptional increase in 2003 and 2004. In three years, the operating profit gained 12 billion euro or 70 p.c. After taking into account the other elements of the results, and particularly the financial and exceptional results, non financial corporations made a net profit after tax of 41 billion euro, representing a strong increase in comparison with 2004.

Return on equity increased significantly in 2005 in the largest companies. The slight decline in the leverage effect had a positive influence on financial independence and, due to historically low interest rates, the associated charges continued to fall. The net working capital of large companies and SMEs went up, while the working capital needs of the former tend to exceed their net working capital. Investments caught up in 2005 in the major companies, mainly in the non manufacturing sector, but in terms of the median value there was a slight decline, linked to lower use of production capacity. Rising amounts invested in R&D were concentrated on a smaller number of companies. As far as financial risks are concerned, they levelled off in 2005, after several years of decline.

JEL Code : C35, G30, G33, L60, L80

Key words : firms results, financial structure, bankruptcy prediction, sectoral analysis

Abstracts of the working papers series

90. Industry wage differentials, unobserved ability, and rent-sharing: Evidence from matched worker-firm data, 1995-2002, by R. Plasman, F. Rycx and I. Tojerow, October 2006.

The paper investigates inter-industry wage differentials in Belgium, taking advantage of access to a unique matched employer-employee data set covering the period 1995-2002. Findings show the existence of large and persistent wage differentials among workers with the same observed characteristics and working conditions, employed in different sectors. The hypothesis that workers with better unmeasured abilities are over-represented in high-wage sectors may not be rejected on the basis of Martins' (2004) methodology. However, the contribution of this explanation to the observed industry wage differentials appears to be limited. Further results show that ceteris paribus, workers earn significantly higher wages when employed in more profitable firms. The instrumented wage-profit elasticity stands at 0.063 and Lester's range of pay is about 41 per cent of the mean wage. This rent-sharing phenomenon accounts for a large fraction of the industry wage differentials. The authors find indeed that the magnitude, dispersion and significance of industry wage differentials decreases sharply when controlling for profits.

91. The dynamics of trade and competition, by N. Chen, J. Imbs and A. Scott, October 2006.

The authors present, extend and estimate a model of international trade with firm heterogeneity in the tradition of Melitz (2003) and Melitz and Ottaviano (2005). The model is constructed to yield testable implications for the dynamics of international prices, productivity levels and markups as functions of openness to trade at a sectoral level. The theory lends itself naturally to a difference in differences estimation, with international differences in trade openness at the sector level reflecting international differences in the competitive structure of markets. Predictions are derived for the effects of both domestic and foreign openness on each economy. Using disaggregated data for EU manufacturing over the period 1989-1999 the authors find evidence that trade openness exerts a competitive effect, with prices and markups falling and productivity rising. Consistent with theory however, these effects diminish and may even revert in the longer term as less competitive economies become attractive havens from which to export from. The paper provides evidence that this entry into less open economies induces pro-competitive effects overseas in response to domestic trade liberalization.

92. A New Keynesian model with unemployment, by O. Blanchard and J. Gali, October 2006.

The authors develop a utility based model of fluctuations, with nominal rigidities, and unemployment. In doing so, they combine two strands of research : the New Keynesian model with its focus on nominal rigidities, and the Diamond-Mortensen-Pissarides model, with its focus on labor market frictions and unemployment. In developing this model, they proceed in two steps.

They first leave nominal rigidities aside. They show that, under a standard utility specification, productivity shocks have no effect on unemployment in the constrained efficient allocation. They then focus on the implications of alternative real wage setting mechanisms for fluctuations in unemployment.

They then introduce nominal rigidities in the form of staggered price setting by firms. They derive the relation between inflation and unemployment and discuss how it is influenced by the presence of real wage rigidities. They show the nature of the tradeoff between inflation and unemployment stabilization, and they draw the implications for optimal monetary policy.

93. Price and wage setting in an integrating Europe : Firm level evidence, by F. Abraham, J. Konings and S. Vanormelingen, October 2006.

Europe has witnessed the last decade an accelerated process of economic integration. Trade barriers were removed, the euro was introduced and ten new member states entered the European Union. Economic integration is likely to have an impact on both labor and product markets. Unlike most other papers, that focus on product and labor markets separately, the authors look at the link between globalization and product and labor market imperfections simultaneously. To this end, they rely on a rich panel of manufacturing firms in Belgium, a small open economy. They find that union bargaining power is higher in sectors characterized by high price cost margins. Moreover, ignoring imperfections on the labor market, leads to an underestimation of product market power. Concerning the influence of globalization, their main findings are that both price cost margins and union bargaining power are typically lower in sectors that are subject higher international competition. This result is especially true for competition from low wage countries.

94. Simulation, estimation and welfare implications of monetary policies in a 3-country NOEM model, by J. Plasmans, T. Michalak and J. Fornero, October 2006.

The authors derive a microfounded macro New Keynesian model for open economies, be them large or small. They consider habit formation in consumption, sectoral linkages, domestic and foreign governments, tradable and non-tradable final and intermediate goods and imperfect pass-through in these sectors. Sticky nominal prices and wages are modeled in a Calvo way. The model economy is composed of a continuum of infinitely-lived consumers and producers for three regions (countries). Numerical simulations and econometric estimations are presented with a focus on a small open economy member of the EMU. Welfare implications of the involved price and wage rigidities are discussed.

95. Inflation persistence and price-setting behaviour in the euro area: a summary of the Inflation Persistence Network evidence, by F. Altissimo, M. Ehrmann and F. Smets, October 2006.

The paper provides a summary of current knowledge on inflation persistence and price stickiness in the euro area, based on research findings that have been produced in the context of the Inflation Persistence Network. The main findings are: i) Under the current monetary policy regime, the estimated degree of inflation persistence in the euro area is moderate; ii) Retail prices in the euro area are more sticky than in the US; iii) There is significant sectoral heterogeneity in the degree of price stickiness; iv) Price decreases are not uncommon. The paper also investigates some of the policy implications of these findings.

96. How wages change: Micro evidence from the International Wage Flexibility Project, by W.T. Dickens, L. Goette, E.L. Groshen, S. Holden, J. Messina, M.E. Schweitzer, J. Turunen and M. Ward, October 2006.

How do the complex institutions involved in wage setting affect wage changes? The International Wage Flexibility Project provides new microeconomic evidence on how wages change for continuing workers. The authors analyze individuals' earnings in 31 different data sets from sixteen countries, from which they obtain a total of 360 wage change distributions. They find a remarkable amount of variation in wage changes across workers. Wage changes have a notably non-normal distribution; they are tightly clustered around the median and also have many extreme values. Furthermore, nearly all countries show asymmetry in their wage distributions below the median. Indeed, the authors find evidence of both downward nominal and real wage rigidities. The paper also find that the extent of both these rigidities varies substantially across countries. The results suggest that variations in the extent of union presence in wage bargaining play a role in explaining differing degrees of rigidities among countries.

97. Nominal wage rigidities in a new Keynesian model with frictional unemployment, by V. Bodart, G. de Walque, O. Pierrard, H.R. Sneessens and R. Wouters, October 2006.

The paper proposes a search and matching model with nominal stickiness à la Calvo in the wage bargaining. It analyzes the properties of the model, first, in the context of a typical real business cycle model driven by stochastic productivity shocks and second, in a fully specified monetary dynamic stockastic general equilibrium model with various real and nominal rigidities and multiple shocks. The model generates realistic statistics for the important labor market variables.

98. Dynamics on monetary policy in a fair wage model of the business cycle, by D. De la Croix, G. de Walque and R. Wouters, October 2006.

The authors first build a fair wage model in which effort varies over the business cycle. This mechanism decreases the need for other sources of sluggishness to explain the observed high inflation persistence. Second, the authors confront empirically their fair wage model with a New Keynesian model based on the standard assumption of monopolistic competition in the labor market. They show that, in terms of overall fit, the fair wage model outperforms the New Keynesian one. The extension of the fair wage model with lagged wage is judged insignificant by the data, but the extension based on a rent sharing argument including firm's productivity gains in the fair wage is not. Looking at the implications for monetary policy, the paper concludes that the additional trade-off problem created by the inefficient real wage behavior significantly affects nominal interest rates and inflation outcomes.

99. The kinked demand curve and price rigidity: evidence from scanner data, by M. Dossche, F. Heylen and D. Van den Poel, October 2006.

The paper uses scanner data from a large euro area retailer. The authors extend Deaton and Muellbauer's Almost Ideal Demand System to estimate the price elasticity and curvature of demand for a wide range of products. Their results support the introduction of a kinked (concave) demand curve in general equilibrium macro models. They find that the price elasticity of demand is on average higher for price increases than for price decreases. However, the degree of curvature in demand is much lower than is currently imposed. Moreover, for a significant fraction of products they observe a convex demand curve. The authors find no correlation between the estimated price elasticity/curvature and the observed size or frequency of price adjustment in their data.

100. Lumpy price adjustments: a microeconometric analysis, by E. Dhyne, C. Fuss, H. Peseran and P. Sevestre, October 2006.

The paper presents a simple model of state-dependent pricing that allows identifying the relative importance of both nominal and real factors in price rigidity. Using two rich datasets consisting of a large fraction of the price quotes used to compute the Belgian and French Consumer Price Indices, the authors are able to evaluate, the importance of the menu costs and to discriminate between idiosyncratic and common shocks that affect the marginal cost and/or the desired mark-up at the outlet level. They find that infrequent price changes are not necessarily associated with large menu costs. Indeed, real rigidities appear to play a significant role. They also find that asymmetry in the price adjustment may result from a trend in marginal costs and/or desired mark-ups rather than from asymmetric menu costs.

101. Reasons for wage rigidity in Germany, by W. Franz and F. Pfeiffer, October 2006.

The study investigates institutional and economic reasons for downward wage rigidity regarding three occupational skill groups. Based on a survey of 801 firms in Germany and an econometric analysis, the authors find strong support for explanations based on the effects of labour union contracts and efficiency wages that differ between skill groups. Survey respondents indicate that labour union contracts and implicit contracts are important reasons for wage rigidity for the (less) skilled. Specific human capital and negative signals for new hires are causes of the stickiness of wages for the highly skilled. Compared with US evidence, German firms seem to attach more importance to labour union contracts and specific human capital.

102. Fiscal sustainability indicators and policy design in the face of ageing, by G. Langenus, October 2006.

Mainly due to increasing concerns about the potential impact of population ageing the sustainability of public finances has become one of the key issues in fiscal assessments. The paper briefly reviews the different theoretical benchmarks and empirical tests for sustainability and assesses the sustainability of public finances in euro area countries on the basis of the latest projections of the Ageing Working Group of the EU Economic Policy Committee. Two alternative operational indicators for fiscal sustainability are proposed and appropriate policy options to restore fiscal sustainability are explored for three individual euro area countries. Pre-funding strategies that create the budgetary room that is needed to finance ageing costs in advance require important consolidation efforts for most euro area countries and can imply aiming at significant budgetary surpluses in the coming years for some. However, a simplified technical exercise assessing the evolution of the fiscal burden of the average worker shows that such strategies generally imply a more even distribution of the fiscal burden across generations than more gradual adjustment strategies.

103. Macroeconomic fluctuations and firm entry: theory and evidence, by V. Lewis, October 2006.

The paper studies the behaviour of firm entry and exit in response to macroeconomic shocks. The author formulates a dynamic stochastic general equilibrium model with an endogenous number of producers. From the calibrated model, she derive a minimum set of robust sign restrictions to identify four kinds of macroeconomic shocks in a vector autoregression, namely supply, demand, monetary and entry cost shocks. The variables entering the VAR are output, inflation, the nominal interest rate, profits and firm entry. The response of firm entry to the various shocks is freely estimated. Her main finding is that entry responds significantly to all types of shocks. The results also show a crowding-in of firm entry following an exogenous rise in demand, consistent with the effect of a consumption preference shock predicted by the model.

104. Exploring the CDS-Bond basis, by J. De Wit, November 2006.

Markets for credit default swaps (CDS) and bonds of the same reference entity and maturity are bound by no-arbitrage conditions. Indeed, using a large data set the author shows that CDS premia and par asset swap spreads are mostly cointegrated. Nonetheless, the average CDS-bond basis (i.e. the difference between both measures) is positive in the period 2004-2005. He detects fourteen different economic basis drivers, which make the basis firm-specific and time-dependent. Furthermore, he describes the basis smile, and illustrates that the average basis is the lowest for five year maturities of corporate credits denominated in euro.

105. Sector concentration in loan portfolios and economic capital, by K. Düllmann and N. Masschelein, November 2006.

The purpose of the paper is to measure the potential impact of business-sector concentration on economic capital for loan portfolios and to explore a tractable model for its measurement. The empirical part evaluates the increase in economic capital in a multi-factor asset value model for portfolios with increasing sector concentration. The sector composition is based on credit information from the German central credit register. Finding that business sector concentration can substantially increase economic capital, the theoretical part of the paper explores whether this risk can be measured by a tractable model that avoids Monte Carlo simulations. The authors analyze a simplified version of the analytic value-at-risk approximation developed by Pykhtin (2004), which only requires risk parameters on a sector level. Sensitivity analyses with various input parameters show that the analytic approximation formulae perform well in approximating economic capital for portfolios which are homogeneous on a sector level in terms of probability of default (PD) and exposure size. Furthermore, the authors explore the robustness of their results for portfolios which are heterogeneous in terms of these two characteristics. They find that low granularity ceteris paribus causes the analytic approximation formulae to underestimate economic capital, whereas heterogeneity in individual PDs causes overestimation. Indicative results imply that in typical credit portfolios, PD heterogeneity will at least compensate for the granularity effect. This suggests that the analytic approximations estimate economic capital reasonably well and/or err on the conservative side.

Conventional signs

–	the datum does not exist or is meaningless
e	estimate by the Bank
n.	not available
p.c.	per cent
p.m.	pro memoria

List of abbreviations

BNRC	Belgian National Railway Company
EC	European Commission
ECB	European Central Bank
EDP	Excessive Deficit Procedure
ESA	European System of Accounts
ESCB	European System of Central Banks
FRA	Forward Rate Agreement
FTE	Full-time equivalent
FTI	Final Taxed Income
GDP	Gross Domestic Product
HICP	Harmonised index of consumer prices
IAS	International Accounting Standards
ICP	Index of consumer prices
ICT	Information and Communication Technologies
IMF	International Monetary Fund
IFRS	International Financing Reporting Standards
NACE-Bel	Belgian version of the statistical nomenclature of economic activities in the European Community
NAI	National Account Institute
NBB	National Bank of Belgium
NEMO	National Employment Office
NSI	National Statistical Institute
NSSO	National Social Security Office
OECD	Organisation for Economic Co-operation and Development
OLO	Linear Bond
RIF	Railway Infrastructure Fund
ROE	Return on equity

SMEs	Small and Medium-sized Enterprises
UMTS	Universal Mobile Telecommunications Systems
VAT	Value Added Tax

Editor

J. SMETS
Director

National Bank of Belgium
boulevard de Berlaimont 14 – BE-1000 Brussels

Contact for the review

Ph. QUINTIN
Head of department Communication and Secretariat

Tel. +32 2 221 22 41 – Fax +32 2 221 30 91
philippe.quintin@nbb.be

Cover and layout: NBB Prepress & Image
Published in December 2006